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INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED CREDIT

IN THE AMOUNT OF EUR 89.2 MILLION
(US$100 MILLION EQUIVALENT)

TO THE

REPUBLIC OF NIGER

FOR AN

AGRICULTURAL AND LIVESTOCK TRANSFORMATION PROJECT

May 30, 2019

Agriculture Global Practice
Africa Region

CURRENCY EQUIVALENTS

Exchange Rate Effective April 30, 2019

Currency Unit =	FCFA
586 FCFA =	US$ 1
1.1215 US$ =	EUR 1

FISCAL YEAR
January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

ACBP	Africa Climate Business Plan
ADB	African Development Bank
AF	Additional Financing
AFD	French Development Agency *(Agence Française de Développement)*
AI	Artificial Insemination
APCA	*Agence de Promotion du Conseil Agricole* (Promotion Agency for Agricultural Extension)
APSU	Agricultural Policy Support Unit
ARAP	Abbreviated Resettlement Action Plan
ARMP	*Agence de Régulation des Marchés Publics* (Public Procurement Regulatory Agency)
AWPB	Annual Work Plan and Budget
BDS	Business Development Services
CA	Cooperative Association
CAADP	Comprehensive Africa Agriculture Development Program
CAP-3/*PAC-3*	Community Action Program Phase 3 *(Programme d'Actions Communautaire 3)*
CBPP	Contagious bovine pleuropneumonia
CERC	Contingent Emergency Response Component
CPF	Country Partnership Framework
CR	*Comité Régional* (Regional Committee)
CSA/*PASEC*	Climate-Smart Agriculture Support Project *(Projet d'Appui à l'Agriculture Sensible aux risques Climatiques)*
CSF	Cost-sharing financing
CSO	Civil Society Organization
CT	*Comité Technique* (Technical Committee)
DA	Designated Account
DNSV	*Direction Nationale des Services Vétérinaires* (General Directorate of Veterinary Services)
DPO	Development Policy Operation
ECOWAP	Economic Community of West African States Common Agricultural Policy
ECOWAS	Economic Community of West African States
ERR	Economic Rate of Return
ESMF	Environmental and Social Management Framework
FAO	Food and Agriculture Organization of the United Nations
FCV	Fragility, Conflict, and Violence
FINDEX	World Bank's Financial Inclusion Index
FIRST	Financial Sector Reform and Strengthening Initiative
FISAN	*Fonds d'Investissement pour la Sécurité Alimentaire et Nutritionnelle* (Investment Fund

	for Food Security and Nutrition)
FM	Financial Management
FMD	Foot and Mouth Disease
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GEMS	Geo-Enabling Initiative for Monitoring and Supervision
GHG	Greenhouse Gas
GM	Grants Manual
GoN	Government of Niger
GRS	Grievance Redress Service
IBM	Iterative Beneficiary Monitoring
IDA	International Development Association
IDP	Internally Displaced People
IFAD/*FIDA*	International Fund for Agricultural Development *(Fond International de Développement Agricole)*
IFC	International Finance Corporation
IFR	Interim Financial Report
IGAs	Income Generating Activities
IPF	Investment Project Financing
IRM	Immediate Response Mechanism
LABOCEL	*Laboratoire Central d'Élevage* (Central Livestock Laboratory)
MAGEL	*Ministère de l'Agriculture et d'Élevage* (Ministry of Agriculture and Livestock)
MFD	Maximizing Finance for Development
MFI	Microfinance Institutions
MG	Matching Grant
MIS	Management and Information System
MP	Microproject
MSP	Multi-Stakeholder Platform
MTR	Mid-Term Review
M&E	Monitoring and Evaluation
NAP	National Adaptation Plan
NCU	National Coordination Unit
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
NMPDFC/ DNPGCA	National Mechanism for the Prevention and Management of Disasters and Food Crises/*Dispositif National de Prévention et de Gestion des Crises Alimentaires*
NPF	New Procurement Framework
NPV	Net Present Value
SNCA	*Système National de Conseil Agricole* (National System of Agricultural Extension)
OIE	World Organization for Animal Health

ONAHA	*Office National des Aménagements Hydro-Agricoles au Niger* (National Hydro Agricultural Development Office)
OP/BP	World Bank's Operational Policy/Bank Procedure
PAD	Project Appraisal Document
PAPs	Project-affected persons
PARCA	*Projet d'Appui aux Réfugiés et Communautés d'Accueil* (Refugees and Host Communities Support Project)
PCG	Partial Credit Guarantee
PCP	*Point de Contrôle Phytosanitaire/*Phytosanitary checkpoint
PDES	*Plan de Développement Economique et Social* (Plan for Economic and Social Development)
PDO	Project Development Objective
PFI	Participating Financial Institution
PIM	Project Implementation Manual
PIMELAN	*Projet Intégré and de Modernisation de l'Élevage et de l'Agriculture au Niger* (Niger Agricultural and Livestock Transformation Project)
PMP	Pest Management Plan
PO	Producer organization
PP	Productive Partnership
PPP	Purchasing Power Parity
PPR	*Peste des petits ruminants* (Small ruminant plague)
PPSD	Project Procurement Strategy for Development
PRAPS-Niger	*Projet Régional d'Appui au Pastoralisme au Sahel–Niger* (Regional Sahel Pastoralism Support Project in Niger)
PRODEX	*Projet de développement des exportations et des marchés agro-sylvo-pastoraux* (Agro-Sylvo-Pastoral Export and Market Development Project)
PSC	Project Steering Committee
PVS	Performance of Veterinary Services (OIE)
RAP	Resettlement Action Plan
RCUs	Regional Coordination Units
REDISSE	Regional Disease Surveillance Systems Enhancement Project
RF	Results Framework
RMR	Risk Mitigation Regime
RPF	Resettlement Policy Framework
RRA	Risk and Resilience Assessment
RSF	Risk Sharing Facility
RSFM	Risk Sharing Facility Manual
SCD	Systematic Country Diagnostic
SDDCI	Sustainable Development and Inclusive Growth Strategy
SIIP/*PARIIS*	Regional Support Project to the Sahel Irrigation Initiative *(Project d'Appui Régional à l'Initiative pour l'irrigation au Sahel)*

SME	Small and Medium Enterprise
SOE	State-owned Enterprises
SORT	Systematic Operations Risk-rating Tool
SP	Subproject
SPIN	*Stratégie de la Petite Irrigation au Niger* (National Strategy for Small-Scale Irrigation Development)
SUP	Start-Up Partnership
TA	Technical Assistance
t CO_2-eq	Tons of carbon dioxide equivalent
UN	United Nations
VC	Value Chain
WAAPP	West Africa Agriculture Productivity Project

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name
Niger	AGRICULTURAL AND LIVESTOCK TRANSFORMATION PROJECT

Project ID	Financing Instrument	Environmental Assessment Category
P164509	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[✓] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Disbursement-linked Indicators (DLIs)	[ ] Small State(s)
[✓] Financial Intermediaries (FI)	[✓] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
20-Jun-2019	22-Dec-2025
Bank/IFC Collaboration	Joint Level
Yes	Joint Project - involving co financing with IFC (loan, equity, budget, other) or staffing

Proposed Development Objective(s)

The Project Development Objective (PDO) is “to increase agriculture productivity and access to markets for small and medium farmers and agri-food small and medium enterprises in the Participating Project Regions.”

Components

Component Name	Cost (US$, millions)

Component 1: Improving the quality of agriculture support services and policies	42.00
Component 2: Increasing investments in agricultural production, processing, and market access	45.00
Component 3: Project coordination	13.00
Component 4: Contingent Emergency Response Component	0.00

Organizations

Borrower:	Ministry of Plan
Implementing Agency:	Ministry of Agriculture and Livestock

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	134.90
Total Financing	134.90
of which IBRD/IDA	100.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	100.00
IDA Credit	100.00
IFC Own Resources/Mobilization	6.00

Non-World Bank Group Financing

Other Sources	28.90
Borrowing Country's Fin. Intermediary/ies	23.00
Local Beneficiaries	5.90

IDA Resources (in US$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
National PBA	100.00	0.00	0.00	100.00
Total	**100.00**	**0.00**	**0.00**	**100.00**

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2019	2020	2021	2022	2023	2024	2025	2026
Annual	0.00	4.21	10.34	15.22	20.61	19.80	16.65	13.17
Cumulative	0.00	4.21	14.55	29.77	50.38	70.18	86.83	100.00

INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture

Contributing Practice Areas

Finance, Competitiveness and Innovation, Fragile, Conflict & Violence

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?	
a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	Yes
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	Yes
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● High

2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Substantial
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Substantial
9. Other	Substantial
10. Overall	Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04		✓
Forests OP/BP 4.36		✓
Pest Management OP 4.09	✓	
Physical Cultural Resources OP/BP 4.11	✓	
Indigenous Peoples OP/BP 4.10		✓
Involuntary Resettlement OP/BP 4.12	✓	
Safety of Dams OP/BP 4.37		✓

Projects on International Waterways OP/BP 7.50	✓	
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description
Schedule 2, Section I, H. LRSF Manager: 1. To facilitate the implementation of Part 2.3(c) of the Project, the Recipient shall no later than nine months after the Effective Date, unless the Recipient and the Association shall have agreed on a different date, execute and thereafter maintain throughout the implementation of the Project, the LRSF Management Agreement with the LRSF Manager in form and substance satisfactory to the Association selected in accordance with the Procurement Regulations, pursuant to which the LRSF Manager shall be responsible for the implementation of the payment activities of PCGs under Part 2.3(c) of the Project.

Sections and Description
Schedule 2, Section I, J. Contingent Emergency Response Mechanism: 1. In order to ensure the proper implementation of Part 4 of the Project ("CERC Part"), the Recipient shall take the following measures:
(a) prepare and furnish to the Association for its review and approval, an operations manual which shall set forth detailed implementation arrangements for the CERC Part, including: (i) designation of, terms of reference for and resources to be allocated to, the entity to be responsible for coordinating and implementing the CERC Part ("Coordinating Authority"); (ii) specific activities which may be included in the CERC Part, Eligible Expenditures required therefor ("Emergency Expenditures"), and any procedures for such inclusion; (iii) financial management arrangements for the CERC Part; (iv) procurement methods and procedures for Emergency Expenditures to be financed under the CERC Part; (v) documentation required for withdrawals of Emergency Expenditures; (vi) environmental and social safeguard management frameworks for the CERC Part, consistent with the Association's policies on the matter; and (vii) any other arrangements necessary to ensure proper coordination and implementation of the CERC Part;
(b) afford the Association a reasonable opportunity to review said proposed operations manual;
(c) promptly adopt such operations manual for the CERC Part as shall have been approved by the Association ("CERC Operations Manual") no later than six (6) months after the Effective Date;

Conditions

Type	Description
Effectiveness	The Recipient has prepared and adopted (i) the PIM, and (ii) the Grants Manual in form and substance satisfactory to the Bank.
Type	**Description**
Effectiveness	MAGEL has recruited the following personnel: (i) for the NCU: a technical director, a financial sector specialist, an agri-business specialist and a social safeguards specialist; and (ii) for the RCU in each Participating Project Region, a regional private sector specialist.
Type	**Description**
Disbursement	Notwithstanding the provisions of Part A in the FA, no withdrawal shall be made: (a) for

	payments made prior to the Signature Date
Type Disbursement	Description Notwithstanding the provisions of Part A in the FA, no withdrawal shall be made: (b) under Category (2), unless at least one Participation Agreement has been signed and all conditions for its effectiveness have been met
Type Disbursement	Description Notwithstanding the provisions of Part A in the FA, no withdrawal shall be made: (c) under Category (3), unless (i) the Recipient has adopted the RSFM in form and substance satisfactory to the Association, and (ii) at least one Participation Agreement has been signed and all conditions for its effectiveness have been met
Type Disbursement	Description Notwithstanding the provisions of Part A in the FA, no withdrawal shall be made: under Category (4), unless the IFC Risk-Sharing Facility Establishment Agreement has been executed and delivered and all conditions precedent to its effectiveness (other than the effectiveness of the Financing Agreement) have been fulfilled, all in a manner satisfactory to the Association;
Type Disbursement	Description Notwithstanding the provisions of Part A in the FA, no withdrawal shall be made: (e) under Category (5), unless the (i) Local Risk-Sharing Facility Establishment Agreement and (ii) LRSF Management Agreement have been executed and delivered and all conditions precedent to their effectiveness have been fulfilled
Type Disbursement	Description Notwithstanding the provisions of Part A in the FA, no withdrawal shall be made: (f) under Category (6), unless and until the Association is satisfied, and has notified the Recipient of its satisfaction, that all of the following conditions have been met in respect of said activities: (i) the Recipient has determined that an Eligible Crisis or Emergency has occurred, has furnished to the Association a request to include said activities in the CERC Part in order to respond to said Eligible Crisis or Emergency, and the Association has agreed with such determination, accepted said request and notified the Recipient thereof; (ii) the Recipient has prepared and disclosed all safeguards instruments required for said activities, and the Recipient has implemented any actions which are required to be taken under said instruments, all in accordance with the provisions of Section I.G.3 of Schedule 2 to the Financing Agreement. (iii) the Recipient's Coordinating Authority has adequate staff and resources, in accordance with the provisions of Section I.G.2 of Schedule 2 to the Financing Agreement, for the purposes of said activities; and, (iv) the Recipient has adopted an CERC Operations Manual in form, substance and manner acceptable to the Association and the provisions of the CERC Operations Manual

	remain or have been updated in accordance with the provisions of Section I.G.1 of Schedule 2 to the Financing Agreement so as to be appropriate for the inclusion and implementation of said activities under the CERC Part.

I. STRATEGIC CONTEXT

A. Country Context

1. **Niger is a large, landlocked country in the Sahel region. The country's population is estimated at over 22 million and growing rapidly at about 3.8 percent per year**. Almost half of the population is less than 15 years old, and life expectancy is low at 62 years. Four-fifth of the country's adult population remains illiterate. Prevalence of malnutrition is high with some 43 percent of children under five suffering from stunting and wasting. In the 2018 Human Development Index, Niger was ranked last out of 189 countries. The country's economy is predominantly rural and informal: 78 percent of the population resides in rural areas, and 80 percent of the jobs are in the informal sector. Two-thirds of the country is inhospitable desert; more than 84 percent of the population is concentrated in areas along the Niger River in the southwestern part of the country and along its long southern border with Nigeria. The climate is mostly arid; annual rainfall in 85 percent of the country's area is less than 350 mm.

2. **Niger meets the definition of a country at risk of fragility, conflict, and violence.** The country has managed to remain stable within a difficult and insecure regional environment. This is due to a relatively strong social cohesion and a political settlement in which the elites manage to solve their disputes in a regulated manner. However, the country is subject to many Fragility, Conflict and Violence (FCV) risk factors. First, demographic trends with extremely high population growth are not boding well for a country already lacking economic opportunities. Second, institutional deficits remain significant, with Niger ranking 112 out of 180 countries in the 2017 Corruption Perceptions Index. External stresses play a large role in potential instability as there have been an increasing number of attacks on Niger's territory by Boko Haram and other terrorist groups.

3. **Two regional conflicts, the crisis in Mali and the Boko Haram regional crisis, are causing major displacement towards and within Niger and are having an adverse impact on economic activities**. The country is at present hosting over 280,000 people displaced by conflict: approximately 158,000 refugees, 109,000 Internally Displaced People (IDPs), and 16,000 Nigerien nationals who returned from Nigeria because of the conflict. The 2016 Risk and Resilience Assessment (RRA) highlights the security and economic impacts of regional conflicts and forced displacement on Niger. In addition, Niger is also exposed to multiple internal conflict and fragility risks, which stem from a combination of structural causes and short-term drivers. The increased military spending is putting a severe strain on the public spending.

4. **Although poverty incidence is declining, Niger remains among the poorest countries in the world**. Real annual growth rates averaged 6.4 percent between 2012 and 2017 compared to 5.1 percent between 2001 and 2007 and 1.6 percent the previous decade. Growth is highly volatile and predominately driven by agriculture (representing about 40 percent of Gross Domestic Product (GDP)), which is subject to the vagaries of climatic shocks. While Niger has made progress in reducing poverty from about 50.3 percent to 45.7 percent (using the international poverty line of US$1.90) between 2005 and 2014 the number of poor people has increased steadily from 6.75 to 8.17 million in the same period. Despite macroeconomic improvements, Niger continues to face persistent, long-term development challenges linked to its size and a largely rural population often beyond the reaches of public services. With an estimated average per capita GDP in current prices of US$365 (PPP) in 2017, Niger is well below the average GDP for Sub-Saharan Africa of US$1,600 (IMF, 2017).

B. Sectoral and Institutional Context

5. **Agriculture (crops, livestock, and fisheries) is very important for the economy and employment.** The sector represents about 40 percent of the national GDP and occupies nearly 90 percent of the active population. The performance of the sector is highly variable from one year to another because of its high exposure to

agronomic, climatic, and more recently security risks.[1] The exposure to these risks is accentuated by the very low level of capital investment in the sector and the lack of resources to apply technology to help improve productivity and resilience in the face of disruption in production cycles. The shocks that follow agricultural and livestock crises have a strong impact on household incomes, on the national budget, and on the growth rate of the overall Nigerien economy.

6. **Crop productivity is low compared to neighboring countries, and the bulk of crop production is consumed locally with little marketable surplus**. Most crop production is consumed locally with little marketable surpluses. Crop production is most favorable in the relatively humid areas in the southern part of the country, i.e. the Niger valley as well as some other areas such as Zinder, Maradi, Tahoua, and Diffa. These small areas produce over half of the country's food. In those areas, production is mainly composed of rice and horticultural products under irrigated, fairly intensive, year-round production conditions. In the North East, there are some 19 million hectares composed mainly of pasture lands, where land is shared between crop and livestock production. Most crops are produced under rainfed conditions with low yields, including millet, sorghum, and other cereals (including coarse/feed grains), as well as legumes (cowpeas, groundnuts) in more modest amounts. Agricultural productivity remains low, and productivity growth has been low compared to neighboring Burkina Faso, Mali and Chad,[2] largely because of the low input/low output agriculture practiced by the vast majority of farmers, an under-developed inputs market, and also very little investment in productivity-enhancing agricultural practices and technology.

7. **Niger has substantial assets and opportunities to develop its agriculture, both on the supply and demand side.** In developing its agriculture, Niger can count on the following tangible assets that have high potential for growth, including:

(a) ***On the supply side***: (i) a substantial potential for irrigated farming, along the Niger river valley, temporary ponds and rivers, as well as underground water, offers opportunities to develop diversified and productive agriculture systems; (ii) the presence of a large and diversified herd with untapped potential for increased productivity through animal health, better feed, genetic improvements, and better husbandry practices; (iii) the availability of plant varieties and animal breeds recognized for their adaptive and productive potential in their agro-climatic environments which are ready to be disseminated and applied; and (iv) the traditional know-how and good experience of producers in certain specialized production areas typical of the region and landscape, such as flood recession cultivation, livestock fattening, artisanal milk production, or poultry rearing; and

(b) **On *the demand side***, agriculture development is spurred by: (i) a sizable and increasing domestic demand for food, in particular processed food, in tune with the nutrition needs of a rapidly increasing population overall, and with changing consumer preferences shifting towards greater diversification of diets and more value being attributed to convenience and quality; and (ii) the sustained demand and

[1] Over the period 2000-2010, the agriculture production index in Niger fell dramatically due to major shocks in the years 2000 (drought, floods, pests), 2004 (drought, locusts), and 2009 (droughts and floods), see Figure 3.2, in Agricultural Sector Risk Assessment in Niger: Moving from Crisis Response to Long Term Risk Management, World Bank, Report 74322-NE, 2013.

[2] Between 1961 and 2016, based on World Bank data, cereal yields in Niger only increased from 505 kg/ha to 530 kg/ha, while in Burkina Faso they increased from 408 to 1181 kg/ha, in Mali from 707 to 1607 kg/ha, and in Chad from 592 to 844 kg/ha (https://data.worldbank.org/indicator/AG.YLD.CREL.KG). The average yield for cowpeas over the period 2008-2010 was 300 kg/ha in Niger, as opposed to 400kg/ha in Mali and Senegal, 500kg/ha in Burkina Faso, and 800kg/ha in Nigeria (FAOSTAT Data, reported by Agriculture Growth in West Africa, 2015, Op. Cited).

competitiveness of key export sectors (onions, peppers, tomatoes, cowpeas, cattle/meat) on regional and international markets.[3]

8. **The livestock sector contributes 13 percent to the national GDP and provides 7 percent of the country's export earnings**. The national herd is estimated at more than 10 million cattle, 24 million small ruminants, 1.5 million camels, and an estimated 18.7 million poultry. Three main types of livestock rearing systems co-exist in Niger: (i) the "pastoral systems" characterized by animal mobility (extensive breeding systems for camels, small ruminants, and cattle); (ii) the traditional sedentary livestock farming systems practiced by villagers throughout the country, for ruminants and poultry; and (iii) the "improved livestock systems" (mainly semi-intensive and intensive peri-urban poultry raising and ruminant fattening). Livestock rearing and management remain fairly traditional, and animal species are often local hybrids which, while highly suitable for free grazing under dryland conditions, offer only limited genetic potential for increasing production under improved husbandry and management practices. Animal health remains a serious problem with many diseases remaining endemic and vaccination programs depending on donor resources. The situation is accentuated by pastoral livestock systems that follow natural grazing defined by rainfall patterns and carry diseases across national boundaries, as well as a certain reluctance among herders to systematically account for and vaccinate their animals. With a rapidly growing population and need for farm land, there are increasing tensions between sedentary farmers and livestock producers on the one hand and the traditional pastoralists on the other hand, competing for scarce grass/fodder resources. In an environment where people struggle to meet basic food needs, the production of fodder to increase animal productivity is in competition with staple food production.

9. **Overall fish production is relatively small; the main fish output comes from Lake Chad**. The recorded production between 2012 and 2017 fluctuated within a range of 27,000 to 47,000 tons, representing a local availability of only about 2 kg per inhabitant per year. It should be noted that, due to the Boko Haram insurgency, numerous fishing operations have ceased, and reliable quantitative information is lacking. Most of the catches from Lake Chad are exported to Nigeria (in smoked form). Some fish are imported fresh or frozen from Mali, Nigeria, Senegal, Benin, Côte d'Ivoire, and Asian countries. River fishing along the Niger River is also practiced and the catch is mostly consumed locally. There are man-made fish ponds which produce mostly tilapia and African catfish; however, the number of functioning fish ponds and their estimated outputs are not known.[4]

10. **Existing climate risks, exacerbated by the effects of climate change, will continue to adversely affect the agriculture sector at large**. The 2013 World Bank agriculture sector risk assessment report indicated that Niger's GDP growth rate dipped into negative territory eight times between 1984 and 2010, and drought was largely responsible. Key hazards for crops include droughts, irregular rainfall, and floods. Projections indicate that mean and maximum temperature as well as the duration of heat spells may increase, although rain may also increase marginally in the project locations. Mean monthly temperature changes are projected to undergo greater variability. The number of days with Minimum Temperature greater than 20°C is also likely to increase by 55 annually by 2060. As a result, crop and livestock production are both expected to experience significantly increased climatic stresses.

11. **Public and private extension advisory services for agriculture, including technical advice for processing and marketing, are weak.** Some of the factors explaining the weakness of extension services include (i) poorly funded public extension services that lack operational capacities; both extension and research services have

[3] See Agricultural Growth in West Africa: Market and Policy Drivers, Part II Demand and Consumption Trends, FAO and AfDB, 2015. See also value chains analyses conducted by GoN during project preparation (2018), in project files.

[4] Fish are also caught in temporary seasonal ponds during the rainy season. There are currently an estimated 70,000 people employed in this subsector, involving fishermen, processors, and traders, and the estimated contribution to GDP is about 0.7 percent.

limited physical and human resources and aging personnel; (ii) low volume of research due to a lack of secure funding, along with sometimes poor relevance to the needs of the different segments in the farming community; and (iii) inadequate budgets to provide high-quality advisory services to farmers and disseminate technologies where information is needed. While a national extension strategy and a corresponding plan of action exist, they have not yet been implemented. This is compounded by weak policy development capacity in the Ministry of Agriculture and Livestock (MAGEL) and a dearth of proposals for reforms of the incentive environment for agricultural development.

12. **Improved water management is essential for improving agriculture, livestock, and fish productivity; significant water resources exist but are insufficiently used.** Rainfall is seasonal and surface water is scarce, only the Niger River flows permanently throughout the year, while five other large rivers feed the river flow only part of the year. Surface water management infrastructure was built in the 1960s and 1970s for the irrigation of rice and cotton; however, those installations are old and dilapidated, suffering from poor maintenance and management that prevent proper system use. The country enjoys large renewable groundwater reserves of around 2.5 billion m^3, and 2,000 billion m^3 of non-renewable water reserves. It is estimated that only 1 percent of surface runoff and 15 percent of renewable groundwater are currently used, and that less than 30 percent of potentially irrigable land is currently irrigated.[5]

13. **Commercial farming and processing remain small.** A recent World Bank study[6] on agribusiness reveals different types of players in the agri-food sector which can be categorized in three segments: (a) medium-sized agri-food enterprises: there are nine medium-sized enterprises with annual revenues going from US$1 million up to US$23 million, and with a number of employees ranging from 15 to 150. These medium-sized enterprises operate in commercial farming and the trade of onions, horticulture products, poultry, and the processing of wheat and dairy products. They sell on the local market through distributors and retailers and very few sell on regional or international markets; (b) the second segment includes the small enterprises (about 14 enterprises) and traders with annual revenues of less than US$1 million. Enterprises in this segment are involved in the processing of different agri-food products (onion, tomatoes, meat, cereals, etc.), and sell mainly on local markets to wholesalers, directly in stores and sometimes regionally, and (c) the third segment, the largest one, includes (i) more than 50 women associations involved in grinding and processing of fruit, cereals, and dairy products; (ii) about 8,500 farmer cooperatives who sell the surplus of their production in the market and more recently started to be involved in processing; and (iii) enterprises providing support services to farmers and the small and medium enterprises (SMEs) in the agri-food sector. SMEs are mostly concentrated in urban areas while farmers cooperatives are in rural areas.

14. **There are multiple challenges constraining the development of commercial farming and processing, but there are also some opportunities.** The challenges vary across various segments of the commercial lending customers**.** For the medium-size enterprises, the challenges include the competition from the informal sector, difficulties in securing inputs because of non-effective delivery systems from farms, producers that are very small

[5] There is an increasing interest for the installation of small-scale irrigation that relies on small water retention infrastructure or through pumping of ground water that would be managed locally by communities instead of relying on the larger surface distribution schemes. There are also about a thousand ponds, including 175 permanent ones, that are mostly used by livestock herders for watering their cattle. Niger is one of the participating countries to the Sahel Irrigation Initiative Project (SIIP, P154482) whose objectives to are to improve stakeholders' capacity to develop and manage irrigation and to increase irrigated areas using a regional 'solutions' approach across the Sahel region. To sustain and increase investments, the Government of Niger undertook major reforms in the sector (ONAHA restructuration, Water User Associations Law, irrigation schemes management contracts) as well as approval of an innovative strategy for small-scale irrigation (National Strategy for Small Scale Irrigation Development; SPIN, March 2015).

[6] Niger - Deep dive of the agribusiness sector conducted by the World Bank in 2018 and World Bank and IFC staff assessments reflected in BTORs and Aide memoire.

and spatially dispersed, low competitiveness due to high costs of production, and limited access to long-term finance for investments. For the small enterprises and cooperatives, the main challenges include (i) the lack of access to finance which is reflected in the lack of access to modern equipment, poor transportation facilities, lack of storage, and lack of adequate packaging; (ii) limited access to markets due to the lack of market information, weak transport infrastructure, poor linkages between producers and other actors of the agri-food value chains due to the absence of commercial relationships, such as contract farming, or productive partnerships between actors of the value chains; (iii) low quality of production (sometimes linked to poor skills, lack of cold storage, poor packaging); (iv) limited access to land for farming; and (v) high level of taxation which discourages informal enterprises from legal registration. In addition, women in the agri-food sector are constrained by their limited mobility and lack of access to finance (particularly due to lack of collateral). Despite those challenges, there are also some opportunities including: contract farming, especially in the dairy, meat, and onion industries between agribusinesses and small-scale farmers or producers; and there is a growing demand for agri-food products linked to high population growth in Niger, and the development of regional markets.

15. **Agriculture finance from financial institutions is key to achieving the transformation of the agriculture and livestock sector but remains scarce.** Only five institutions (two banks and three microfinance institutions) currently provide loans to the agri-food sector. This is the result of multiple factors including the large inflows of subsidies in the agriculture and livestock sector that have resulted in crowding out private funding from financial institutions, and constraints on the supply side as well as on the demand side. Recently, given the increasing competition in the financial sector and pubic interventions to improve the supply side (through adoption of agriculture finance reforms such as warehouse receipt finance and leasing laws), financial institutions have started to show a new interest in serving rural areas. This is reflected in the increase by 70 percent of lending to the agriculture sector between 2015 to 2018, which has been mainly driven by the growth of the state-owned agriculture bank's loan portfolio. Despite this increase, agriculture lending remains low, representing about two percent of the total loan portfolio of financial institutions. The World Bank's Financial Inclusion Index (FINDEX) indicates that only about 1.1 percent of the adult population had access to credit for farming and for agriculture-related businesses in 2017. Lending for the agriculture sector, from both banks and microfinance institutions, is typically short-term, allowing for a cycle of crop production but rarely for investments that would structurally change farming systems. Equity financing to start a business is not available at all. Other sources of finance for the agri-food sector include informal lending from traders at prohibitive costs (with reimbursement of loans in kind – sometimes more than 50 percent of the farm outputs), and agri-food entrepreneurs' own savings.

16. **The current supply of agriculture credit is constrained by multiple factors.** These factors include (i) the crisis of the microfinance sector with the largest microfinance institution (MFI), which holds 70 percent of all MFI clients, on the verge of bankruptcy; (ii) financial institutions' lack of expertise in agriculture credit; (iii) limited presence in rural areas -- only 21 communes out of 266 have a bank or MFI branch; (iv) the high operational costs of doing business in rural areas; (v) the low use of mobile finance and non-bank agents to improve the outreach and reduce operational costs; and (vi) financial institutions' lack of long-term finance which reduce their capacity to provide loans with longer maturity. Financial Institutions'[7] appetite for lending to the agri-food sector has also been negatively impacted by the high level of non-performing loans experienced by some MFIs[8] and by the limited performance of the one main bank lending to this sector.

17. **The** Government's **efforts to establish the "Investment fund for nutritional and food security" *(Fonds***

[7] Banks and microfinance institutions.

[8] Indeed, three MFIs serving the sector had a level of non-performing loans (NPLs) hovering at 32 percent in 2018 (compared to an average 13 percent in the country) – reflecting inadequate management information systems and weak capacities for credit and risk management as well as the consequences of shocks, such as the one caused by the abrupt devaluation of the Nigerian Naira.

d'Investissement pour la Sécurité Alimentaire et Nutritionnelle, FISAN), **a government agency in charge of the promotion of agriculture finance, and to put in place a more coherent framework for agriculture finance should help improve access to finance for actors in the agri-food sector and catalyze the modernization of the sector.** In 2016, the FISAN harmonized agriculture finance policies among donors with the introduction of a subsidized credit scheme. Under this scheme, agricultural producers can have access to grants covering up to 40 percent of their total investment costs, based on the approval of a financial institution to provide credit in an amount of 50 percent of the total investment cost. While the experience has been mixed so far due to (i) restrictive eligibility criteria, (ii) producers' low understanding of credit, and (iii) financial institutions' risk aversion with regards to agriculture finance, donors and some commercial banks[9] have shown strong interest in supporting the scheme, and it is creating a new momentum on which the project will build.

18. **Food insecurity and malnutrition remain significant problems.** In recent years, the growth of food production overall was slightly lower than population growth, with the increase in the food deficit being partly filled by imports. The World Food Program estimated in 2017 that nearly 20 percent of the population could not meet their food needs because of inadequate agricultural production, security constraints, and high demographic growth. This figure rises to nearly 30 percent during periods of poor rainfall; Niger is vulnerable to climate shocks, with drought being the most important risk in terms of frequency and impacts. Forty-eight percent of children under five years of age suffer from chronic malnutrition, 10.3 percent are acutely malnourished, and diets lack the necessary vitamins and minerals. As a result, over 73 percent of children under five, and almost 46 percent of women of reproductive age, are anemic.

19. **Women are marginalized in the economy.** A variety of negative factors undermine women's participation in the economy. These include insufficient access to productive resources; low human capital (inadequate technical education); limited access to markets; a legal framework that renders them dependent on their spouses for access to modern financial instruments; and substantial contributions to the reproductive sphere of their households limiting their engagement in economic activities. These factors must be addressed to achieve the project's development objectives. Box 1 provides more details on gender gaps existing in agriculture. The main gaps that will be addressed by the project include: increasing women's access to productive assets and technical advice, increasing the productivity of women engaged in value chain activities, and increasing their access to markets.

20. **Youth unemployment is acute; it undermines the political and economic stability of the country**. In Niger, 68 percent of the population is under 24 years of age.[10] The problem of youth unemployment is severe: in 2014, 25.2 percent of youth were unemployed (13.9 percent men and 36.6 percent women).[11] Given the lack of job opportunities, particularly in rural areas, youth unemployment threatens to undermine the country's political stability, particularly within the context of the influence of religious and other forms of extremism.[12] Hence, to avoid the instability and violence currently experienced by Niger, the focus should be on reducing the population growth rate, the world's highest at 3.8 percent per annum,[13] and providing economic opportunities for young people. The focus on youth requires a gender perspective to develop effective and well-targeted programs. Unless

[9] Luxembourg cooperation, Swiss Cooperation, French Development Agency, KFW have tried pilots or have shown interest in supporting the scheme. BAGRI was the only bank which participated in the pilot, but recently other commercial banks have expressed interest to FISAN in participating.
[10] Index Mundi, Niger Demographic Data, 2018.
[11] LOSTAT, Share of Youth 'Not in Employment, Education and Training' (NEET), 2014.
[12] Youth unemployment and political instability in selected developing countries, Therese F. Azeng & Thierry U. Yogo, Working Paper No. 171, African Development Bank, May 2013.
[13] "Niger has the world's highest birth rate – and that may be a recipe for unrest", by John F. May, former World Bank staff member and population expert, in the Conversation, March 21, 2019.

young women receive adequate training and have prospects for steady employment, the high birth rates will undermine the country's economic gains. Similarly, technical training and the creation of viable jobs for young men, in the agriculture sector particularly, is a condition for sustainable development and peace. Ensuring that Niger's youth is directly empowered with income-earning activities, that they have access to education and training opportunities, and a voice in local decision-making, is advocated by the Country Partnership Framework (CPF; 2018-2022). The project will emphasize youth inclusion. It will mainstream youth dimensions in all its activities, giving youth preferential treatment particularly in project-provided agriculture training and services, as well as funding of investment initiatives.

Box 1: Gender Gap in Niger

The Gender Gap index which measures inequality index between sexes based on reproductive health, empowerment, and economic status has shown a high disparity between females and males, with Niger ranking 154th out of 155 (UNDP 2015). The main factor affecting the low enrollment rate of girls is early marriage with 76 percent of girls married before they turn 18, and about a third becoming wives before they turn 15. According to the 2017 Systematic Country Diagnostic (SCD) for Niger, 34 percent of Nigerien women are out of the labor force as opposed to 10 percent for men, and those employed receive lower earnings.

Younger women's economic activities have shifted from agricultural production to product processing. Notwithstanding some cultural differences, most women were active producers in traditional household agriculture. Women, especially old women, as traditional farmers, are the repository of a great deal of knowledge about crops and their cultivation. At present most women's economic activities are centered in the processing of agricultural products. These include cooking oils, shea butter, and a variety of local spices from sylvan products. Older women and widows are free to produce in the fields and market their products. In contrast, younger women of reproductive age are often confined to the household from where they conduct most of their processing and liaise with off-takers. Both women and men invest in sedentary livestock as a form of savings. Earnings from crop production are usually invested in livestock.

Factors affecting women's productivity in agricultural production. The CPF indicates that 'plots managed by women produced 19 percent less per hectare than plots managed by men.' There are three major factors that have a direct effect on women's agriculture productivity in Niger: (i) *access to external (hired) labor*: labor is still the limiting factor of production in rural Niger; the more labor an individual can mobilize at crucial times in the farming cycle (land preparation, sowing, weeding and harvesting) the more she can produce; (ii) *access to agricultural inputs* such as: improved seeds, industrial fertilizer, pest control inputs, inputs for improved storage of perishable products, etc. In terms of animal husbandry, this includes adequate feed and veterinary services; and (iii) a*ccess to their own time*, i.e. the extent of their obligations to the household in terms of domestic household activities such as fetching fuelwood and water, cooking and infant care lead to a situation where the time they can dedicate to farming activities and other productive activities, as opposed to reproductive activities, is limited; in this respect, women, depending on their age, do not have the same obligations to the household or the same level of access to the labor of others in the household. For each project activity, gender gaps have been identified as part of project preparation and factored into the project design.

C. Relevance to Higher Level Objectives

21. **The project is fully aligned with the Government's strategy in support of agriculture and the environment.** The agriculture strategy is described in the Plan for Economic and Social Development II (PDES II),

covering 2017-21, focused on rural transformation. This plan is also intended to operationalize the Rural Transformation Program of the Sustainable Development and Inclusive Growth Strategy (SDDCI) of the Government. The objectives of the project are also in line with Niger's Nationally Determined Contribution (NDC) with regards to improving the resilience of the agriculture, animal husbandry, and forestry subsectors to climate change, based on the adoption of climate-smart agriculture (CSA). For Niger, the adaptation options considered as top priority, which will be supported by the project, are those that permit higher resilience of its rural population to increasingly unpredictable weather patterns, as well as the practices and techniques that will combine improved productivity and reduced Greenhouse Gas (GHG) emissions. The project is aligned with the Economic Community of West African States (ECOWAS) Common Agricultural Policy (ECOWAP) and the pan-African Comprehensive Africa Agriculture Development Plan (CAADP).

22. **The project is fully aligned with the Systematic Country Diagnostic (SCD)[14] completed in FY17.** The SCD underlines that "improving the productivity in agriculture remains a first priority for poverty reduction."

23. **The project is fully aligned with the Niger Country Partnership Framework (CPF) for the period of FY18-FY22**.[15] The CPF's overarching goal is "to help safeguard and accelerate Niger's economic and social development, by tackling growth constraints, unsustainable population growth and other fundamental (and emerging) drivers of fragility." The first CPF Focus Area is "Increased Rural Productivity and Incomes" and it has two sub-objectives: "Increased rural production with diversified output in the agriculture and livestock sectors" and "Improved availability of productive infrastructure for trade in rural areas." The project is therefore well aligned with the CPF as it would contribute to increased productivity and access to markets for the agriculture sector. It would generate employment in general and for women and young people in particular in the project areas. The project also supports the CPF's overarching goal of empowering women to enable development policies to succeed. Finally, the project also contributes to the objectives of the Africa Climate Business Plan (ACBP) through its emphasis on climate-smart practices.

24. **Under International Development Association Eighteen (IDA18), Niger is benefitting from a special Risk Mitigation Regime (RMR)[16] allocation.** The overall objective of the World Bank's RMR support in Niger is to mitigate the escalation of existing crises and contribute to the reduction of key fragility and conflict risks. The World Bank's strategy for risk reduction is pursuing a dual approach. First, by addressing the short-term drivers of conflict and fragility with a focus on the most fragile and crises-affected regions (prevention of escalation). Second, tackling medium- to long-term drivers and structural factors, for example through investments that can reduce risks of future conflict and strengthen institutions to manage risks and support social cohesion (sustaining peace).

25. **The project is contributing to the second objective of the Niger RMR strategy and objectives "Increasing opportunities for youth and women in fragile regions** and supporting the peaceful management and sharing of agro-pastoral resources." Also, the RMR allocation has guided the project's design on three dimensions: (i) geographic coverage; (ii) beneficiary targeting; and (iii) risk management capacity. Regarding geographical coverage, the project focuses a large share of its interventions in "at risk" identified regions located along the Malian and Nigeria-Nigerien borders, such as in the Diffa, Tahoua, and the Tillabéri regions. For beneficiary targeting, the project has a specific focus on youth and women in these regions. Risk management capacity is discussed later in the risk section of the PAD.

[14] Report number 115661.
[15] Report number 123736.
[16] For more details, please see RMR implementation note for Niger.

II. PROJECT DESCRPTION

A. Project Development Objective

PDO Statement

26. **The Project Development Objective (PDO)** is "to increase agriculture productivity and access to markets for small and medium farmers and agri-food small and medium enterprises in the Participating Project Regions."

PDO Level Indicators

27. **The PDO Indicators** are the following:[17]

a. Increase in the yield of crop and livestock products (peppers, cowpeas, onions, cattle meat, and eggs) produced by targetted beneficiaries (percentage, including by female and by under-35 youth beneficiaries); and
b. Increase in the value of marketed agricultural commodities by project beneficiaries (percentage, including by female and by under-35 youth beneficiaries).

Project Design

28. **Overall design.** The project will provide capacity building for advisory and support services and financing of investments to help improve productivity and commercialization in the agriculture sector. Target beneficiaries are small- and medium-scale farmers and entrepreneurs who are ready to engage in the intensification of their production, the development of value-added activities to primary production, and the logistics for agricultural production to reach markets (including processing, storage, and transport). IDA financing will be complemented by loans to beneficiaries from Participating Financial Institutions (PFIs). In line with the reforms supported under the current Development Policy Operation (DPO) for FY19 (Niger Fostering Rural Growth Reform Grant DPO Series, P163318) focused among others on the fertilizer market, seed system, and promoting e-extension, the project will support profitable production systems that meet the project eligibility criteria, *inter alia*, contribution to socio-economic development; contribution to food, nutritional security and value-added potential; job creation (especially for women and youth); positive impact on trade balance; and contribution to climate resilience and mitigation.

29. **Crisis prevention and management**. The Sahel, of which Niger is an integral part, is an environment where climatic variability is the norm with short rainy seasons (normally from July to October) followed by longer dry seasons (November to June). However, droughts and unpredictable rainfall patterns are characteristic; the timing of these events cannot be predicted accurately; yet they are expected periodically. The growing importance of animal movement and sub-regional trade are gradually expanding the presence of pests, thus increasing the incidence of crop or animal disease and the potential for outbreak of diseases (such as the Avian Influenza in 2005). Although the costs of dealing with emergencies are far higher than the costs of prevention, funds have been more readily available to respond to emergencies than to prepare for them and mitigate their impact. The project, like the Regional Sahel Pastoralism Support Project in Niger (PRAPS-Niger; P147674) assumes that crisis

[17] See details in the section about Monitoring and Evaluation (M&E) arrangements in paragraph 75. This paragraph presents the rationale for the selection of the crop and livestock commodities to be tracked under the M&E system.

prevention and management for agriculture and livestock crises are an ongoing requirement for Niger. Within this context, the project will allocate resources under Component 4 for an immediate response to emergencies.

30. **Components 1 and 2 will work in synergy**. Through strengthening extension (Subcomponent 1.1), veterinary, and phytosanitary services (Subcomponent 1.2), and supporting the Government to become more efficient in the policy-making process and in crisis prevention (Subcomponent 1.3), component 1 will create a more enabling and supportive technical and legal environment for investors in the agri-food sector. An increased demand for technical support to be funded in the context of the business plans prepared by beneficiaries under component 2 will stimulate the delivery of improved support services (Subcomponents 1.1 and 1.2).

31. **Geographic coverage.** The project will support private investments in six regions: (i) three regions affected by conflict (Diffa, Tillabéri, and Tahoua); and (ii) three other regions (Agadez, Niamey, and Zinder).

32. Since the project will benefit in part from funding under the RMR Window, it will support the pepper value chain in the Diffa region as a key value chain for agricultural development in that region. It will complement the activities of the Additional Financing (AF) for the World Bank-funded Community Action Program (CAP-3-AF, P163144) which is supporting micro-projects in the Diffa region focused on youth and women, and similar approaches will be used to reach women and youth in other conflict areas covered under the project. The project's support for women and youth will be mainstreamed in the key value chains in which they are involved, and the project will address the gaps that exist in their access to training, inputs, capital, and markets compared to respectively their male and adult counterparts. Project interventions will concern the following value chains, in particular: (i) Tillabéri region: onion, cowpea, rice, potatoes, moringa, and other crops; (ii) Tahoua region: onion, cowpea, tomatoes, and other agriculture crops; and (iii) Agadez, Niamey, and Zinder regions: profitable agri-business activities in selected value chains (onion, potato, cowpea) and any other relevant agri-business activity. These activities will typically be carried out through rehabilitation, renovation and minor alterations of existing small-scale community and household irrigation schemes (e.g. installation of pumps at existing wells, renovation of pumps, replacing diesel with solar pumps, shifting to drip irrigation, installing hoses), along with improved agriculture and agro-processing technologies.

33. **Scope of intervention and complementarity with other projects.** The project will seek synergy and complementarity, and avoid duplication, with other projects. *Projet Intégré and de Modernisation de l'Élevage et de l'Agriculture au Niger (PIMELAN)* (Niger Agricultural and Livestock Transformation Project) has been designed to capitalize on lessons from past and on-going World Bank and other externally-financed projects. The project-supported production systems and activities would be complementary to those supported by these projects (see Appendix to Annex 1, which includes projects by other donors).

34. **Regarding cropping activities**, the project's design is built on the lessons learned from the Private Irrigation Project (P072996) and the Agro-Sylvo-Pastoral Export and Market Development Project (PRODEX; P095210). The project will use irrigation technologies developed by the ongoing Regional Sahel Irrigation Initiative Project (SIIP, P154482), and complement the on-going Climate Smart Agriculture Support Project (PASEC, P153420) which is mainstreaming Climate-Smart Agriculture (CSA) in 60 communes. In Diffa, Tahoua, and Tillabéri, the project will provide support to the development of key value chains to complement the Refugees and Host Communities Support Project (PARCA, P164563) which focuses on improving access to basic services and provides safety nets and primary production kits for these groups. Coordinated approaches will be developed with the Lake Chad Recovery and Development Project (P161706; under preparation for FY20), especially on restoring the Diffa region's agricultural production.

35. **Regarding livestock**, the project will focus on productive livestock systems to enhance cattle, small ruminant, and poultry production as well as meat processing, complementing the (PRAPS-Niger) which focuses on

pastoral systems and the Regional Disease Surveillance Systems Enhancement Project (REDISSE; P154807) which deals with animal diseases surveillance.

36. **Regarding access to finance** and support to agribusiness development, the project will enhance the participation of the financial sector in agriculture finance to allow sustainable growth of the sector. It will build on financial sector reforms put in place by the FIRST Financial Inclusion Program (P159341) and will facilitate the implementation of some of the key recommendations of the agriculture finance policy note[18] and agribusiness deep dive study[19] prepared by the World Bank. It will complement on-going efforts to improve farmers' access to financial services via mobile devices under the Smart Villages for Rural Growth and Digital Inclusion project[20] (P167543; under preparation).

37. **Project interventions in conflict versus non-conflict areas**. As the project seeks to support economic transformation in rural areas, its general intervention principles will apply in all selected regions. Activities will be demand-driven and adapted to beneficiaries' needs, but they will be implemented and supervised differently, i.e. in non-conflict areas, the MAGEL will implement activities directly, whereas in conflict areas, to the extent possible, activities will be entrusted to service providers acting on behalf of the Government since it may be difficult to provide services directly due to the security situation. Whenever and wherever possible, bundling of service provision and supervision with service providers working for other projects will be sought.

38. **Maximizing Finance for Development (MFD)**. The project design acknowledges the key role of the private sector in the development of the agri-food sector. It will improve the business environment for private actors to engage at all levels of the value chains, i.e. in production, processing, and trading activities by catalyzing the private sector's participation in commercial farming and processing by facilitating access to finance through a coordinated approach between public and private actors. This coordinated approach will also reduce the risks to attract financial sector funding and build capacities of private and public agents operating in the agri-food sector. The International Finance Corporation (IFC) will play a key role in this process by contributing, in close collaboration with IDA, to reduce the risks perceived by financial institutions in lending to the agri-food sector.

B. Project Components

39. The project with a total cost of US$134.9 million is structured as an Investment Project Financing (IPF) to be implemented over a period of six years. It is being funded by an IDA credit in the amount of US$100 million equivalent to the Government of Niger. IFC will provide US$6 million, the beneficiaries will contribute US$5.9 million, and the PFIs will provide US$23 million (see Table 1). The project has four components: (i) improving the quality of agriculture support services and policies; (ii) increasing investments in agricultural production, processing and market access; (iii) project coordination; and (iv) a Contingent Emergency Response Component (CERC).

Component 1: Improving the quality of agriculture support services and policies (US$42 million equivalent from IDA)

40. The objective of this component is to increase the productivity of agriculture for both crop production and sedentary livestock systems, including aquaculture and fisheries, and to improve the safety of food products, by strengthening agriculture support services and policies. This component will strengthen human and institutional capacity for service delivery and policy development for key actors in the sector. Key outcomes would

[18] "Agriculture finance policy note in Niger", Policy paper, Finance Competitiveness and Innovation Department, World Bank, October 2018.
[19] "Agribusiness deep dive assessment", Finance Competitiveness and Innovation department, World Bank, October 2018.
[20] For the sake of simplicity, this project is often referred to simply as "Smart Villages project."

include (i) improved access to, and delivery of, quality extension and advisory services; (ii) improved access to, and delivery of, quality veterinary and phytosanitary services; and (iii) improved policy and regulatory environment conducive to the development of the sector. All extension and advisory activities are designed to integrate climate-smart agriculture options, as a way to increase producer's awareness of climate risks, and to improve their capacity to mainstream climate adaptation and mitigation actions. This component will be implemented by MAGEL, by the Ministry of Environment and Sustainable Development for fisheries and aquaculture-related activities, and in collaboration with the *Agence de Promotion du Conseil Agricole (APCA)* for Subcomponent 1.1.

41. **Subcomponent 1.1: Strengthening crop and livestock extension services (US$7 million equivalent from IDA).** The objective of the subcomponent is to build capacity of the national extension and advisory service to more effectively play its role in increasing producers' knowledge and capacities. The subcomponent will support the implementation of the strategy for the National Extension and Advisory Services System in agriculture (*Système National de Conseil Agricole*, SNCA) endorsed by the Government of Niger in August 2017. The project will provide targeted support to the operationalization of the APCA, the operational coordinating and programming body of the SNCA, and to advisory services providers. Delivery mechanisms will be adapted for each production system at the regional level. When a region is designated as conflict-affected where government services have difficulty in access, credible service providers will be subcontracted to deliver services. Training of advisory service providers will focus on the use of CSA varieties and practices, including *inter alia* introducing drought and heat tolerant seeds, agroforestry practices, drip irrigation, and solar-pump irrigation schemes.

42. **Subcomponent 1.2: Support to veterinary and phytosanitary services (US$28 million equivalent from IDA).** The objective of the subcomponent is to increase the availability of, and access to, specialized high-quality public and private veterinary and phytosanitary services to producers, and other value chain actors, in order to contribute to crop and animal productivity enhancement, to mitigate increased plant and animal disease risks linked to climate change and to strengthen food quality and safety. The project will support activities aimed at (i) enhancing surveillance systems for emerging and re-emerging crop priority diseases; (ii) controlling priority crop diseases and pests; (iii) controlling priority productivity-impacting livestock diseases; (iv) preventing major fish diseases (especially Tilapia Lake Virus) through targeted surveillance and awareness campaigns with respect to live fish imports; and (v) the promotion of food safety through enhanced quality control of inputs, feed, and food products.

43. **Subcomponent 1.3: Strengthening the policy, legal, and regulatory framework and developing mechanisms for preventing and responding to severe crises and emergencies in the agriculture sector (US$7 million equivalent from IDA).** Under this subcomponent, the project will support the transformation and the strengthening of the effectiveness and efficiency of the Agricultural Policy Support Unit (APSU) of MAGEL. There is already in the Studies and Planning Directorate a small unit which will be transformed by Ministerial Order *(Arrêté Ministériel)* into the APSU. The project will provide support to the unit to develop its analytical and policy reform competencies. As women's economic empowerment is a determinant of agricultural productivity enhancement, the APSU will lead the development of a Gender Policy and gender-sensitive planning and budgeting for the ministry. The project will support the APSU in undertaking policy analyses and making recommendations for removing policy, regulatory, and institutional constraints that negatively affect investments and entrepreneurship in the agri-food sector.

44. This subcomponent will also: (i) support MAGEL's capacity to respond to crises by providing equipment, training and resources for specialized studies and communication campaigns; (ii) support the consolidation and operationalization of crisis prevention and management tools related to agriculture; and support training to

better understand climate change risks, analyze climate information, and integrate climate adaptation and mitigation practices into agricultural programs.

Component 2: Increasing investments in agricultural production, processing, and market access (US$45 million equivalent from IDA)

45. The objective of this component is to increase private investments by the various players in the agri-food sector in agricultural production, processing and market access. To this end, the project will support (i) the development of productive partnerships,[21] (ii) improvement of access to finance for the agri-food sector, including at the level of production, processing, storage, transportation, and marketing both for domestic and export markets, and (iii) the strengthening of the supply of agriculture credit. The component will be implemented by MAGEL, in collaboration with the PFIs, the National Selection Committee, and the Ministry of Finance.

46. The principles of intervention under this component will be: (i) synergy with other World Bank and IFC projects; (ii) focus on agri-food value chains in the project areas that offer the best economic opportunities at the national and international levels; (iii) focus on women and youth; and (iv) integration into investments of the climate adaptation and mitigation options promoted under Component 1.

47. **Subcomponent 2.1: Developing Productive Partnerships (US$6 million equivalent from IDA).** To improve access to markets and value chain coordination, the project will finance (i) the establishment of a productive partnership program for producers and SMEs in agri-food value chains presenting good economic opportunities; and (ii) communication and financial literacy campaigns. The project will:

(a) finance the following set of activities for the establishment of the productive partnership program: (i) the identification of off-takers for agriculture, livestock, and aquaculture products with good prospects at the national, regional, and potentially international level; (ii) support producers and SMEs to enter into commercial agreements with those off-takers; (iii) build the capacities of those producers and SMEs to respond to the demand of these off-takers and to improve the quality of their production; (iv) develop sustainable business models and business plans that could allow sustainable growth of those SMEs and producers association involved in productive partnerships (for commercial farming, processing and commercialization); and (v) providing technical support services to implement the business plans. These activities will be implemented by different firms specialized in the agri-food sector, business development services, and incubators at the national, regional or international level. Those firms will be selected through a competitive bidding process. Beneficiaries' selection will be done through a call for proposals (see annex 2 for details). The Project Implementation Manual (PIM) will provide the details of the productive partnership program; and

(b) finance (i) communication campaigns; (ii) financial literacy programs; and (iii) training of trainers in financial management/literacy in the project regions. This will be done through specialized firms with proven expertise in these different areas.

48. **Subcomponent 2.2: Increasing Access to Finance (US$28 million equivalent from IDA).** To address the limited availability of finance in the agri-food sector, the project will support the establishment of a cost-sharing financing (CSF) program based on matching grants and systematic involvement of financial institutions. The CSF

[21] A productive partnership in the framework of the project is defined as a partnership which will allow production of agri-food on the basis of an agreement or informal arrangement between purchasers and producers or SMEs. The project will support such agreements/arrangements, for example with advisory services for agricultural and livestock techniques, and/or business development and management techniques before and after they receive financing support from the project.

will allow producers, producer groups, and SMEs in the agri-food sector, that have benefitted from the productive partnership program, or that have other pre-identified off-takers or markets, to access financing for working capital and viable medium-term investments. Investments will be systematically accompanied by technical assistance to improve the beneficiaries' management and technical skills as described under subcomponent 2.1.

49. Two types of grants will be provided under the CSF program under Window #1 and Window #2 (see below) to facilitate access to finance to increase investment in the agri-food sector and catalyze the emergence of strong SMEs. The grants will be managed by Participating Financial Institutions (PFIs) to be selected following the World Bank's IPF policy. Eligibility criteria specific to grants are defined in Annex 2. Further details will be defined in the Grants Manual (GM) which will be finalized prior to effectiveness. The selected PFIs will enter into a legal "Participation Agreement" with the MAGEL, which is a disbursement condition for this subcomponent.

(a) **Window #1** (US$6 million): To address the limited access to finance in the agri-food sector in vulnerable regions such as Diffa, Tahoua, and Tillabéri, the project will provide matching grants for working capital and small investments in productive agricultural assets that have a demonstrated potential to improve the incomes of, create jobs for or increase the resilience of beneficiaries. The following could be eligible under this window: producer groups, youth and women groups, and SMEs already operating or interested in farming and activities resulting in value-addition for agri-food products. These groups would have to show (i) that they have received support for productive partnerships under the productive partnership program or have other pre-identified off-takers or markets; and (ii) that they currently have no access to financial services from financial institutions. Grants under this window will range from US$500 to US$3,000. Seventy percent of the grants (in number) will be allocated to women and young people (under 35 years old). Grants will cover up to 80 percent of the costs of the subproject presented by eligible beneficiaries, while the beneficiaries will have to provide a minimum of 20 percent in cash or in-kind. Women- and youth-led SMEs and groups will be required to provide only 10 percent cash or in-kind contributions and will receive grants covering up to 90 percent of the costs of the eligible investment. All beneficiaries will be required to open accounts in a financial institution (microfinance, bank, or mobile account). PFIs in charge of grants under this window will receive management fees to ensure the quality of their services; and

(b) **Window #2** (US$22 million): To address the limited access to finance for producer groups and SMEs in the regions of Diffa, Tahoua, Tillabéri, Niamey, Zinder, and Agadez, the project's CSF program will provide matching grants backed by loans from PFIs for investment in subprojects in the agri-food sector. Under this window, the CSF program, in accordance with the FISAN principles, is a cost-sharing program between beneficiaries, donors, and financial institutions. The project will provide grants for up to 40 percent of the costs of each subproject, while the beneficiaries will have to prove that they have obtained loans from a PFI for up to 50 percent of the subproject costs. The remaining 10 percent of the subproject funding will be provided by the beneficiaries in the form of cash contributions. Eligible subprojects under this window include working capital and investments, such as equipment, storage, small infrastructure for production, post harvesting and processing activities, and any other activities related to the agri-food sector. Where feasible, energy efficient equipment as well as climate-resilient and energy efficient design storage and small infrastructure facilities will be supported. The CSF will be accessible to producer groups, processors groups, and SMEs (including startups) who would have received support under the productive partnership program, or who have a pre-identified off-taker. Grants under this window may range from US$4,000 to US$100,000. In the specific case of women and youth, beneficiaries will receive grants up to 50 percent of the subproject costs while they will have to prove that they have obtained loans from a PFI for up to 40 percent of the subproject costs. In-kind contributions would be accepted for women- or youth-led SMEs and women or youth groups for projects with total costs less than US$20,000.

50. **Subcomponent 2.3: Providing support to financial institutions (US$11 million equivalent from IDA with IFC participation of US$6 million).** To address the high risks of lending to the agri-food sector, the project will put in place a risk-sharing mechanism, and it will strengthen the capacity of financial intermediaries to catalyze the supply of credit from financial intermediaries under the CSF scheme. The subcomponent, to be further detailed in the Risk Sharing Facility Manual (RSFM), is divided into two parts and will benefit from the participation of the IFC.

(a) **Risk-Sharing Mechanism** (US$6 million). A risk-sharing facility (RSF) will be put in place to incentivize financial institutions (the same PFIs that are participating under subcomponent 2.2) to provide the 50 percent credit to producers, producer groups, and SMEs in the agri-food sector under Window #2 of the CSF program. The RSF fund will be managed by two independent fund administrators.

i. An IDA allocation of US$3 million will be used as a "first loss" to enable the IFC to set up an RSF of up to US$9 million. This RSF will function as a partial portfolio guarantee for PFIs (particularly commercial banks) loans in the agricultural sector (i.e. 50 percent coverage of the credit risks borne by PFIs). The IFC RSF will cover 50 percent of the principal of defaulted loans offered by the commercial banks under Window 2 of the CSF scheme (described in subcomponent 2.2) and in accordance with a Risk Sharing Facility Framework Agreement between IDA, IFC, the MAGEL, and in line with the RSFM;

ii. A local risk sharing facility (LRSF) to be managed by an independent firm (Fund Manager) and located at the *Société Sahélienne de Financement (SAHFI)*, the private local guarantee company will be established by the project. The US$3 million IDA allocation will serve for the establishment and operationalization of an RSF to improve access to finance from the public bank and MFIs that will not be covered by IFC. The IDA contribution will serve for the capitalization of the Partial Credit Guarantee (PCG) fund that could serve commercial banks and MFIs. The project will also support the costs of PCG management along with technical assistance to SAHFI. The Fund Manager will be selected through an international competitive bidding process (see details in Annex 2). This fund manager will work with SAHFI pursuant to a legal agreement between the MAGEL, SAHFI, and the LRSF Manager (the "Local Risk-Sharing Facility Establishment Agreement") which is a disbursement condition for the LRSF. Part of the IDA financing will serve to cover the costs of the LRSF manager and technical assistance related to the risk sharing facility in accordance with the LRSF agreement; and

iii. As the two guarantee providers under the project, IFC and SAHFI, to the extent possible, will be aligned in terms of processes, risk coverage, pricing and other requirements from the PFIs. Both guarantee schemes will also follow the same operations manual (the RSFM). The selection of financial institutions will follow World Bank Policy and Procedures for IPF operations and follow financial stability and performance criteria. IFC will conduct additional due diligence to ensure that the selected PFIs fit with IFC's investment criteria.[22] Financial Institutions (FIs) that do not qualify under IFC policies due to structural aspects (public, or semi-public entities) but which qualify under World Bank Policy and Procedures for IPF operations and meet financial stability and performance criteria, will be served by SAHFI. PFIs will sign a Partial Credit Guarantee Agreement with either IFC or SAHFI.

(b) **Technical assistance** to PFIs and to FISAN[23] to address the limited capacity of financial institutions for agricultural credit. Technical assistance to FISAN will aim at strengthening their capacity to implement

[22] Criteria defined under annex 2; these will be further detailed in the Grants Manual.
[23] Financial institutions will be required to develop an appropriate gender policy to fulfill the goals of the project.

agriculture finance policies including the warehouse receipt financing strategy. The technical assistance to the PFIs will include (i) the establishment of agricultural finance units within PFIs; (ii) support for the establishment of a network of gender-sensitive agents in the project areas; (iii) capacity building for the development of more suitable financial products, including financing of leasing and storage receipts, mobile finance and other products; and (iv) improving risk capacities and the development of credit assessment techniques based on financial and non-financial information provided by the database to be created as part of the World Bank Smart Villages for Rural Growth and Digital Inclusion project (P167543);[24] (v) farm credit risk management; (vi) support for the application of the principles of environmental safeguarding; and (vii) support to better understand climate risks and the impacts of climate change as well as design and implement adequate risk- reduction and risk- transfer mechanisms. The costs of technical assistance for capacity building could be shared between the project and the PFIs.

Component 3: Project coordination (US$13 million equivalent from IDA)

51. The objective of this component is to support MAGEL in the implementation of the project. This component would provide support to the National Coordination Unit (NCU) in MAGEL for all activities required to manage IDA funds, procure IDA-funded goods, works and services, conduct project monitoring and evaluation (M&E), including Iterative Beneficiary Monitoring (IBM), and comply with safeguard policies. It will also implement a communication strategy, including communication campaigns that work closely with women associations and traditional leaders. It will provide the necessary gender-inclusive training and equipment support to the MAGEL, the Ministry of Environment and Sustainable Development, the Ministry of Commerce and Private Sector Development, the Ministry of Planning, and the High Commissioner's 3N initiative at central and regional level to carry out gender-sensitive, technical monitoring of project implementation and M&E for the aspects that concern them in the context of the project.

Component 4: Contingent Emergency Response (US$0 from IDA)

52. The CERC will be established and managed in accordance with the provisions of World Bank Policy and Bank Directive on Investment Project Financing. The project’s CERC will be triggered only when the Government has officially declared an emergency and a statement of the facts is provided justifying the request to activate the use of emergency funding. If the World Bank agrees with the determination of the disaster and associated response needs, this component allows the Government to request the World Bank to recategorize and reallocate financing from other project components to cover emergency response and recovery costs.

C. Project Beneficiaries

53. **Direct beneficiaries**. The project is expected to benefit primarily an estimated 25,000 small and medium crop, sedentary livestock, and fish farming households, and small and medium enterprises in target areas. Women and youth are targeted beneficiaries, and the numbers reached will be monitored. Direct project beneficiaries also include: (i) PFIs; (ii) agriculture and livestock producer and processor organizations and (iii) public agricultural support services.

54. **Indirect beneficiaries**. Indirect beneficiaries include: (i) on the production, processing and marketing side: other agriculture, livestock, and fish farmers not directly involved in project activities, but who will benefit particularly from improved control of crop and animal diseases and higher quality crop and livestock inputs and services; (ii) value chain stakeholders (buyers and processors) who will not directly benefit from financial support from the project but would benefit from increased provision of financing for crop, livestock, poultry, and fish

[24] The "Smart Villages" project aims to improve digital inclusion in rural areas, especially for producers by facilitating their access to mobile payments, by allowing credit rating of farmers on the basis of financial transactions via mobile.

commodities and improved access to credit; (iii) on the consumption side, consumers in Niger who will benefit from increased and better quality crop and animal products and nutritional benefits at the household level; (iv) other indirect beneficiaries will be agriculture and livestock value chain service providers, including private veterinarians and inputs providers (seeds, fertilizers, feed, and veterinary medicines); and (v) any beneficiaries of reforms supported in the sector.

D. Summary Project Costs and Financing

Table 1: Summary Project Costs and Financing (US$ million)

Components	IDA	IFC	Beneficiaries	PFIs	Total
Component 1: Improving the quality of agriculture support services and policies					
SC1.1 Strengthening crop and livestock extension services	7.0				7.0
SC1.2 Support to veterinary and phytosanitary services	28.0				28.0
SC1.3 Strengthening the policy, legal, and regulatory framework and developing mechanisms for preventing and responding to severe crises and emergencies in the agriculture sector	7.0				7.0
Sub-total	**42.0**				**42.0**
Component 2: Increasing investments in agricultural production, processing, and market access					
SC2.1 Developing productive partnerships	6.0				6.0
SC2.2 Increasing access to finance	28.0		5.9	23.0	56.9
SC2.3 Providing support to financial institutions	11.0	6.0			17.0
Sub-total	**45.0**	**6.0**	**5.9**	**23.0**	**79.9**
Component 3: Project coordination					
Sub-total	**13.0**				**13.0**
Component 4: Contingent Emergency Response Component (CERC)					
Sub-total	**0**				**0**
Grand Total	**100.0**	**6.0**	**5.9**	**23.0**	**134.9**

E. Results Chain and Theory of Change

55. The project is aligned with the Government's vision for the agri-food sector, i.e. to increase primary production of both sedentary livestock and crops to alleviate chronic food shortages, to make surpluses available for the domestic and external markets, and to provide supplies for in-country value addition. Project support would contribute to food import substitution and to the increase of agri-food exports, given the country's untapped agricultural potential and comparative advantage for certain value chains. This is expected to reduce the country's food insecurity during the annual cycle, especially towards the end of the dry season when stocks of the main staple foodstuffs are depleted, and during periodic crises such as droughts, and to reduce animal and crop disease outbreaks, the risks of which are increasing with climate change.

56. The main constraints to improving productivity, and thus food security and generating some surpluses for the market, are the traditional farming systems with little value added beyond the farm gate and little capital investment, and the lack of access to finance for farmers. Farmers and value chain operators lack access to financing, and they are extremely vulnerable to climate-related and market shocks, hence are reluctant or unable to adopt new technology, use improved, certified inputs, and adhere to food safety measures. In addition, they operate in a policy and regulatory framework not conducive to sector development and with little aggregation of production and processing that can generate value added. Generally, there is a low level of capitalization and investment in the agri-food value chains.

57. The project would address those constraints by providing institutional support to better apply research findings through more efficient extension services; these findings are available to a large extent but remain to be effectively disseminated and adopted at farm and operator level. The project would reduce sanitary and phytosanitary risks through access to improved plant and animal health services. It would also strengthen the policy and regulatory framework, as well as the related infrastructure and institutions, necessary to promote investments in the agri-food sector. The project would make available grant resources to boost investment and attract entrepreneurs to the agri-food sector and provide risk-sharing facilities to financial institutions so that they have greater incentives to lend to agriculture. Simultaneously, the project would help the Government prevent and manage crises, with support to strategic planning and mechanisms for better coordination of the resources at its disposal, as well as the provision of resources to mitigate the impact of crises more effectively.

58. The underlying theory of change and attendant results chain of project activities is depicted in Table 2 below.

Table 2: Results Chain and Theory of Change

Constraints	Component/ Subcomponent	Outputs	Outcomes	Development Objective
Component 1: Improving the quality of agriculture support services and policies				Increased productivity of small and medium producers and agri-food SMEs
Lack of access to and poor adoption of technology and improved certified inputs; limited adherence to food safety measures Policy and regulatory framework not conducive to sector development	1.1 Establishing the National System for extensions and advisory services, 1.2 Strengthen veterinary, phytosanitary and food safety management services 1.3 Strengthening of agricultural policy planning and regulatory framework	The National System for extension and advisory services established The APCA is operational Improved surveillance systems; Improved management of crop and livestock diseases MAGEL's unit for coordination of agricultural policy strengthened	Capacity and efficiency of extension and advisory services strengthened Producer knowledge and capacities production and product quality, animal health, and food safety increased Access to quality agricultural and zootechnical inputs improved	

			Improved planning and regulatory framework and capacities at MAGEL	
Component 2: Increasing investments in agricultural production, processing, and market access				Increased access to markets for small and medium producers and SMEs
Weak linkage between value chain operators, leading to limited aggregation of production for marketing and processing	2.1 Support for Productive Partnerships	New commercial agreements, and/or productive partnerships with local, regional, and international buyers and local farmers and SME established	Increased sustainable market linkages between producers, SMEs and off-takers	
Low access to finance for agriculture and livestock value chain actors	2.2 Support to private investment in agriculture and livestock through the cost sharing financing program	Matching grants awarded and coupled with credit to women, youth, producers, producer groups, and SMEs in agro-food sector	Increased participation of the private sector in the agriculture and livestock sectors	
Limited participation of financial sector in agriculture lending	2.3 Support to PFIs through risk sharing facility and technical assistance to PFIs	Risk sharing facility and technical assistance to PFIs to increase supply of credit		

F. Rationale for Bank Involvement and Role of Partners

59. The project will strengthen the provision of public services which are essential for the sustainable development of the agri-food sector, including improved extension services, animal and plant health as well as food safety management services – with a focus on public goods and ensuring further engagement of the private sector whenever possible when the nature of the services warrants it. In line with MFD principles, the project will also improve the enabling environment (including policies and regulations) for private investments in the agri-food sector in Niger. The project will address some of the market failures that affect the coordination of agri-food value chains and reduce access to financial services for small and medium producers and agri-food SMEs. The project will establish mechanisms to further expand the outreach of those services, including in fragile and conflict-afflicted areas, and with a specific focus on women and youth. In particular, the risk-sharing instruments put in place by the project are essential to incentivize financial institutions to lend to the agri-food sector, since the sector is very risky and currently instruments such as agri-insurance do not exist. The project will also provide training to PFIs in order to allow them to better understand and serve the agri-food sector.

60. **Value added of the World Bank's support**. The World Bank brings global experience and knowledge on promoting the sustainable development of the agri-food sector. By its strong presence and engagement in Niger, the World Bank can support the Government's efforts to unlock Niger's agriculture potential as envisaged under

the project. World Bank financing will support the much-needed strengthening of public sector services and foster private investments. Along with the World Bank, IFC will play an important role in engaging the private sector. In this regard, the project will provide real opportunities for private partnerships between actors in the selected value chains.

61. There are several development partners supporting the agri-food sector in Niger. Details are provided in Appendix 1 of Annex 1. Some of those partners have expressed interest in collaborating with the project.

G. Lessons Learned and Reflected in the Project Design

62. **Integrated value chain approach.** Projects that focus primarily on increasing agri-food production sometimes lead to post-harvest problems due to the perishable nature of produce, causing losses and/or a reduction in prices. One therefore must look at the whole value chain, assess demand, and deal with storage and transformation/processing/packaging and the logistics to reach the markets. Investing in agri-food value chains also strengthens relationships between stakeholders (youth associations, women's groups, and agribusinesses) across value chains.

63. **Incentives to agriculture investments through more conducive regulations and efficient professional organizations**. It is important to define the proper regulatory framework and strengthen professional organizations so that they can play their role in serving the needs of, and provide adequate services to, their membership. The attendant lesson is that physical investments need to be complemented by regulatory measures, in particular those that create a friendlier business environment and facilitate trade flows.

64. **Matching grants[25] stimulate market development, innovation, and promote asset-building, in particular when linked with the financial sector.** Matching grants may help foster private investments and investors towards underserved markets by addressing specific barriers to market development. However, they have to be designed based on proper identification of a market failure and should include the improvement of access to financial services as an objective to create a long-term impact and avoid market distortion. Also, in order to avoid misallocation and market distortions, matching grants should be designed to target segments and projects that could not directly access finance from formal financial institutions.

65. **Better access to finance is necessary but not sufficient; support to the demand side is required.** It is crucial that farmers and agriculture enterprises benefit from financial and non-financial support to grow, including guidance on how to compete successfully with established industry players, firm capabilities, mentorship and management and operational assistance.

66. **To address issues related to the supply of agriculture products for SMEs and access to markets, commercial partnerships between various actors need to further be developed.** Those partnerships will also need to specify the marketing arrangements that partners must respect, including the quality and quantity of products to be produced and exchanged by each partner, the price level, the price determination criteria, etc.

67. **Access to accurate, reliable, and timely data on local dynamics is crucial to inform project implementation.** The Geo-Enabling initiative for Monitoring and Supervision (GEMS) and IBM will be key tools in the evaluation and monitoring of the project by collecting specific data at any moment. This data will help to capture different dimensions of the situation, as local circumstances can vary within the same country, region, or community, to readjust some activities for example. In this context, it can also help to ensure that the right groups are benefiting from the interventions addressing fragility and conflict-related risks. In regions considered "at risk"

[25] World Bank Finance Report 2018: How could matching grants support access to agriculture finance.

where the project will be implemented, the GEMS will be also a tool to "keep an eye on the ground" despite insecurity.

68. **To effectively reduce the gender gap in the crops, livestock, and fisheries sectors and to increase productivity, it is important to recognize that the 'household' is composed of several units of production**. Although women make important contributions to household farming activities, they also constitute their own units of production, through the food they produce in their gardens as well as the animals they raise as their own. Moreover, the proceeds from their businesses are controlled by them. They are the heads of their own enterprises. Thus, women's farming and value chain activities will be addressed on an individual, head of enterprise basis.

69. **Building connections with other programs to scale up the efforts to address the risks of violence and fragility.** The project will seek synergies with the activities, areas of interventions, and targeting beneficiaries of other projects, such as PARCA (P164563) or the Lake Chad Project (P161706), and those of other development partners to reduce the risks of violence and fragility, recognizing that this requires a mix of interventions.

70. **Invest in prevention and build crisis preparedness capacities**. The joint UN-World Bank Pathways for Peace study found that for every US$1 invested in prevention, about US$16 is saved down the road. The Subcomponent 1.3 of the project is aligned with this vision by supporting the consolidation and operationalization of crisis prevention and management tools related to agriculture.

71. **A spatial approach is good but need to be geographically differentiated to target the regions and communities that are more fragile and at highest risk of violence, conflict and instability.** Knowing the specificities of each local context supports a better design of specific activities and the achievement of goals and expected impacts.

72. **Addressing safeguards risks specific to Niger early in project design**. In Niger there are frequent delays in the release of funds to pay compensation claims where there has been some displacement, particularly economic displacement. This affects the implementation of projects that trigger OP4.12 on resettlement. Therefore, in cases of financing Resettlement Action Plans, the Bank will have to engage the Recipient early on to budget for compensation payments.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

73. The MAGEL will be responsible for overall project coordination and management. In view of the wide geographical coverage of the country and to avoid delays in project start-up and with project implementation in general, it was agreed to retain the National Coordination Unit (NCU) of the Community Actions Program (CAP; P163144), which is located in MAGEL, to coordinate the project. To this end, the NCU will be strengthened with relevant staff in the technical areas that will be supported by the project, including access to agriculture finance and agribusiness, and with regards to the fiduciary functions of the project. The NCU already has Regional Coordination Units (RCUs) in place in each region where they will coordinate project implementation. PFIs and IFC will oversee the implementation of the CSF program and the Risk-Sharing Facility (RSF), respectively. The project will be overseen by a Project Steering Committee (PSC). A PIM and a Grants Manual (GM) will be prepared. They will both be a condition for effectiveness. Details of those arrangements are provided in Annex 1.

74. The NCU will undertake: (i) Monitoring and Evaluation (M&E) and knowledge sharing services to inform project implementation; (ii) technical implementation and monitoring of activities; (iii) fiduciary management (financial/accounting/internal audit management and procurement); (iv) environmental and social management

for compliance with safeguard measures including a grievance redress system (GRS); and (v) gender and youth mainstreaming in all projects operations.

B. Results Monitoring and Evaluation Arrangements

75. Project-level Monitoring and Evaluation (M&E) systems, which will be detailed in the M&E manual included in the PIM, will assess actual change against stated objectives and make a judgment whether development efforts and investments are worthwhile or "cost-effective." The monitoring and evaluation system will capture information on project results against the targets set as part of the Results Framework (RF). It will track, in particular the PDO indicators for the yield increase for the main crops and livestock commodities, produced by the targeted project beneficiaries who receive training, support services and financing under the project, and the related increase in the value of marketed quantities (in constant prices). The context of the country reflecting (i) the security challenges which will prevent visits to all the project areas at any given time to measure the performance of the commodities supported, (ii) the scarce local capacity, and (iii) the high cost of hiring international experts to carry out data collection, forces a simplified method of data collection. The main crops selected as a basis for assessing the PDO outcome are: (i) onions because they are an important commercial crop across the project area; (ii) cowpeas because they are mostly in the hands of women and are both intended for the market and for household consumption; and (iii) peppers because they are the main cash crop in the Diffa province representative of a conflict-affected area. The main livestock commodities which will be tracked are (i) cattle meat because of its prominence across all targeted areas and its key role in exports; and (ii) eggs because of their importance as a market commodity and also in terms of household nutrition. In the initial project phase, the data collection method will rely on a basket of representative crops common to all regions where the project intervenes. For example, in the Diffa Region where sometimes it is difficult to due to the security challenges, pepper is the dominant crop of the region and is part of the basket of commodities for which productivity information will be collected. It is envisaged that, as project implementation and capacities improve and security situation allows, the indicators will be revisited to cover the full spectrum of commodities covered by the project.

76. The PDO indicators will be gender-disaggregated. The RF will also track changes in women and youth's access to assets and services, and improvements in governance, particularly as regard the investment subprojects financed under Component 2.

77. To inform RF indicators at project inception, a baseline survey will be conducted during the first year of project implementation to establish the treatment and control groups, and to verify targets[26]. Beneficiaries will be surveyed subsequently in year 3 (mid-term) and year 6 (project end) to track changes in their livelihood conditions attributable to the project. Yearly crop surveys will be administered to a representative sample of targeted project beneficiaries. Up to the Mid-Term Review (MTR), which will be carried out no later than three years after effectiveness, the project will produce quarterly reports. The MTR will reassess the periodicity of project implementation reports as may be required.

78. In areas difficult to reach due to insecurity or conflict, the project will use "Enhanced Monitoring and Evaluation" to monitor implementation progress for ongoing investments by geo-enabled methods and supplemented by community discussions. This monitoring will be provided by national NGOs or firms, hired and trained by the NCU to collect and send just-in-time information via mobile apps/tablets to the NCU, building on the geo-tagging adopted during the activities' selection process.

79. The project will also use the Iterative Beneficiary Monitoring (IBM) approach – a feedback mechanism which collects qualitative information about deliverables on regular basis through the uses of existing survey

[26] The Result Framework has "0" for baseline because of a technical glitch. It should be "tbd".

mechanisms. The IBM System collects information directly from beneficiaries and produces frequent, short reports that can be useful in identifying emerging issues on the ground.

C. Sustainability

80. The project will support strengthening of agriculture service delivery, including extension and animal and plant health services, to ensure their sustainability after the project's closure. Sustainability of these activities will be enhanced by aligning support with the national strategy that defines the structure of extension services. The project's primary support goes to APCA, the coordinating body mandated to manage the extension and advisory services system (SNCA) and to ensure knowledge delivery to beneficiaries. APCA is responsible for the coordination of all extension efforts including those of all donors and providers in line with broader objectives determined by MAGEL. As such the relatively small structure of APCA is the primary beneficiary of capacity building activities under this project, requiring relatively modest operating costs beyond the project that are within the medium-term budget allocations of MAGEL. The regulatory services supported under the project related to food safety for instance are driven by the demand of the industry where the public sector is only required to provide the regulatory environment, but actual inspection, sampling and testing services can be contracted out to accredited third parties paid for by beneficiaries, who benefit from greater market access thus potential for growing revenues. Sustainability of project achievements is also predicated on a number of project design features *inter alia* aimed at: (i) increasing competitiveness in the agriculture sector by enhancing productivity and resilience through access to improved agricultural technologies to be demonstrated with the improved extension service; (ii) ensuring sustainable support to farmers' access to relevant production information and best practices for decision-making; and (iii) supporting farmers and SMEs to access finance for their investments in a sustainable way through the participation of PFIs. In addition, the project will do the following to enhance sustainability: (i) provide technical solutions and incentives to stakeholders receiving funding, to achieve CSA outcomes required to address climate-related risks; (ii) establish partnerships to ensure better linkage between producers and off-takers; on that front, the project will work closely with the Rural Mobility and Connectivity Project (P164498) to address specific challenges such as improving connectivity between production areas and markets and reducing harvest losses; (iii) empower local-level stakeholders through training and capacity-building to address specific challenges such as developing activities well-tailored to their specific needs; (iv) implement a knowledge management and knowledge sharing system to efficiently capitalize on lessons learned and mainstream them into national policies; and (v) support FISAN's operationalization to ensure sustainable funding for the agri-food sector via the matching grant mechanism.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

81. **Technical analysis.** The project aims at improving productivity and market access through the promotion of improved agricultural support and financial services and ensuring access to these services for target groups including vulnerable groups (women, youth, and others, in particular in areas affected by conflict). To achieve this objective, the project makes investments in improving capacity of institutions and agricultural services and is providing resources for investments in collaboration with the financial sector (PFIs). The investments under component 1 are aligned with national strategies and policies. In the case of advisory services, a Presidential Decree was issued based on a national strategy that defines the structure and the role of the various actors in the sector. To remain cost effective, the project focuses its support on the coordination body (APCA) enshrined in the decree to support the development of sustainable and effective programs of agricultural extension that are properly resourced, focusing primarily on public goods. Support in the livestock sector will focus on national priorities, such as the eradication of the *Peste des Petits Ruminants (PPR)* and improved controls of other priority

diseases. Improvement in the veterinary and phytosanitary services will permit moving from a situation of permanent crisis management reacting to epidemiological or pest outbreaks to a focus on prevention.

82. The technologies to be disseminated by the project already exist; they have been developed, including production and multiplication of improved varieties and planting material, with support from projects such as the West Africa Agricultural Productivity Project (WAAPP, P094084) for Niger. They need to be demonstrated to farmers through the extension services. The project will ensure that these services are duly equipped for that purpose, in particular that they have the capacity to implement participatory approaches such as Farmers Field School or on farm crop demonstrations. These approaches have proven to be efficient in Niger.

83. The dissemination of technologies and consequent increased farmer knowledge and capacities, will be accompanied under the project by complementary interventions designed to further mitigate production risks, as follows: (i) phyto-sanitary interventions designed to fight plant diseases and pest infestations, as well as more accurate climate forecast systems, including early warning systems, that will alert producers; (ii) animal health: livestock species are exposed to epizootic diseases often endemic in the country due to a lack of farmer understanding of the value of vaccines, combined with the risk from transient livestock crossing several borders due to weak surveillance systems; the project will strengthen the epidemic surveillance system to better prevent and overcome possible outbreaks; (iii) the risk of insufficient animal feed, especially for intensive and semi-intensive systems; relatively simple existing techniques to increase feed resources for all systems will be identified, further developed, and disseminated as part of project implementation; (iv) risks related to natural resources and environmental management including soil erosion and fertility loss, and possible pasture degradation, which will be mitigated with climate-smart agricultural practices; and (v) statistics and M&E: a lack of reliable data may prevent sound project follow-up and limit information on project performance; the project will improve data collection as part of the M&E activities; a comprehensive MIS will be established during project implementation to guide data collection and use.

84. The design of the second component – Increasing investments in the agri-food sector -- builds on similar experiences in Niger and Benin, and on studies conducted by the World Bank for the development of agriculture finance and agribusiness. More precisely, the cost sharing facility program's design draws on similar experience of donors such as Swiss Cooperation, and Luxembourg Cooperation with some financial institutions (banks and microfinance institutions) in Niger. It takes into account the lessons learned on these projects by adding a strong focus on building up the demand by supporting producers' and SMEs' access to markets to sell their production, building the capacities of the beneficiaries to grow sustainable and profitable businesses in the agri-food sector and strengthening their financial capabilities so that they do not confuse credit and grants and maintain strong relationships with financial intermediaries. The design of the IDA/IFC risk sharing facility is built on a similar successful experience conducted by the World Bank in Benin for SMEs, while the design of the risk sharing facility with a local guarantee draws on successful experiences in Cape Verde and Morocco.

85. **Economic and Financial Analysis.** The project is expected to: (i) improve the livelihoods of targeted beneficiaries, in particular small producers, and specifically women and youth; (ii) create employment at both farm level and along value chains, including through engaging youth and women in profitable farming and livestock activities; helping youth to secure income generation opportunities in the country would reduce their incentives to migrate to other countries or to engage in illegal activities; (iii) increase tax revenues for the government, from greater economic activities in the formal agri-food sector; and (iv) reduce the trade balance deficit by enhancing exports of certain products, and curbing imports of other products. Simultaneously, the project supports integrated production systems where livestock waste is better integrated in the value chain, boosting crop production for example with rotating high nitrogen-fixing fodder crops with horticulture produce and dryland cereals.

86. The economic and financial analysis assessed the viability of project activities from both private (financial analysis) and social (economic analysis) perspectives. Private and social costs and benefits of agriculture and livestock investments may diverge, owing to: (i) market failures or policy-induced distortions that may bias perceptions by economic actors in value chains; and (ii) negative externalities caused for example by drought and other natural disasters and their impact on productivity and production. Given the uncertainty with regard to future prices and production levels (due to external impacts such as climate change), special emphasis was placed on risk and sensitivity analysis. An average model for subprojects corresponding to CSF Window 1 and nine typical SME models, corresponding to CSF Window 2, were identified based on the different types of productive partnerships expected to be supported by the project. The financial analysis shows that all these models are viable, and therefore that farmers and investors will have an incentive to embark on the corresponding investment initiatives. The economic analysis showed an economic rate of return (ERR) of 15 percent and a Net Present Value (NPV) of US$22.7 million. The sensitivity analysis was conducted regarding potential risks that the project may encounter, resulting in an increase in project costs, a decrease in incremental project gross margins, a delay in benefits, and a total absence of benefits every three years due to the exceptional effects of climate change. This analysis shows that the project economic viability is robust under all scenarios (see Annex 4 for details).

87. **Climate Change Co-Benefits**. The project will contribute to both climate change mitigation and adaptation through the promotion of climate-smart practices (under Component 1) and financing for their implementation (under Component 2). The climate change disaster screening indicates expected climate change impacts on agriculture in the project locations. Projections indicate that mean and maximum temperatures, as well as the duration of heat spells, will increase drastically, and rainfall will increase marginally in the project location. Extreme heat, droughts, and floods may damage crops, livestock, and soil. The project aims to reduce such impact by supporting the dissemination of technologies and practices helping farmers adapting to these changes, such as by equipping ongoing small-scale irrigation schemes with solar pumps, heat and drought tolerant varieties, feed conservation, etc. Through support to extension services, the project will promote technologies supporting the reduction of greenhouse gas (GHG) emissions. Examples of such technologies include improving feeding practices to reduce methane emissions for livestock and carbon content sequestration technologies for crop production. For adaptation, due to increasing droughts, the project will support rehabilitation and renovation of existing small-scale irrigation schemes, including providing access to solar-powered kits and water efficient systems. The project will also support crop rotation enhancements and storage improvements that will be more resilient to climate change impacts such as diseases, pests, or spoilage. The project will support business plans to improve market access and financing for the various actors in the agriculture and livestock sectors for the financing investments at the level of production, processing, storage, and transportation that would enhance resilience to climate change impacts in the project locations.

88. **GHG accounting**. The GHG impact of the project was estimated using the EX-ACT tool. The carbon-balance is defined as the net balance from all greenhouse gases (GHGs) expressed in CO_2 equivalent that were emitted or sequestered due to project implementation (with project-WP) as compared to the business-as-usual scenario (without project situation-WOP). For the project, the GHG accounting calculations were based on the EX-ACT model's carbon balance calculations based on (i) the dominant soil types in Niger (sandy soils); (ii) the climatic conditions in the project areas (tropical dry); and (iii) land use and land management practices, are described in the with and without project situations. Overall, the estimation results show that agriculture interventions constitute a net carbon sink. The total net emissions for the 'with project' scenario are -991,690 tCO_2e with an annual net average carbon emission of -66,113 tCO_2e. The details of the analysis are shown in Annex 5.

B. Fiduciary

89. **The financial management (FM) aspects of the project will be managed by the MAGEL through the NCU of the CAP**. The NCU has a good track record in implementing Phase 1 (P065991), Phase 2 (P102354), and Phase 3 (P132306) of the CAP as well as the Integrated Ecosystems Management Project (P143079)**.** In addition to the NCU, the CAP has regional coordination units (RCUs) in each of the project's eight regions. Both the NCU and RCUs have qualified and well-experienced FM specialists. The current FM team of NCU is comprised of: one FM specialist, two accountants, and three accounting assistants at the national level and eight accountants at the regional level.

90. **The FM performance and the FM risk for the ongoing CAP (P132306) managed by NCU were rated, respectively satisfactory and substantial** following the World Bank supervision mission conducted in January and May 2019. Fiduciary compliance is also deemed satisfactory. For example, the interim non-audited financial reports (IFRs) have been submitted on time, with acceptable quality. The last audited financial statements for the fiscal year ending December 31, 2017, were submitted to the World Bank in a timely manner. However, the auditors issued a qualified opinion due to: (i) the absence of timely and adequate justification of the balance of the accounts receivable, including mission advances; (ii) the inventory of the project's fixed assets was not complete at the time of the audit; and (iii) the discrepancy between the expenditures reported in the financial statements and the trail balance. The project has submitted an action plan to address these issues. The action plan was found acceptable to the World Bank.

91. The conclusion of the FM assessment is that the financial management residual risk for the NCU is substantial. Although the financial management arrangements satisfy the World Bank's minimum requirements under World Bank Policy and Procedure for IPF operations, there remain improvements to be made for the system to be adequate to provide, with reasonable assurance, accurate and timely information on the status of the project as required by the World Bank. Key requirements to be fulfilled by the NCU include: (i) prior to effectiveness, a consultant will be recruited to review and refine the ToRs of the current FM staff to properly handle the activities under the proposed project; (ii) the elaboration and adoption of the PIM will be an effectiveness condition; (iii) a GM for the two financial windows under Component 2 would be produced and adopted in form and substance acceptable to the World Bank which will also be an effectiveness condition; (iv) within three months of effectiveness, update the administrative, financial, and accounting procedures manual as part of the PIM, to incorporate the activities of the project. In addition, several other actions are expected to be completed early in the implementation period. They include (v) within three months of effectiveness, the internal audit team must be strengthened by recruiting a junior internal auditor; (vi) within three months of effectiveness, the accounting software must be upgraded to include the project in order to ensure timely production of semi-annual and annual financial statements; and (vii) within five months of effectiveness, an external auditor must be appointed based on terms of reference acceptable to the World Bank, to audit the projects annual financial statements.

C. Procurement

92. The NCU of CAP (P163144) that is housed in MAGEL, is designated to coordinate the project. To this end, in addition to the Procurement Specialist on board, the NCU will be strengthened in the procurement functions of the project with the recruitment of a procurement assistant.

93. The Recipient will carry out procurement for the project in accordance with the World Bank's "Procurement Regulations for IPF Borrowers" (Procurement Regulations) dated July 2016 and revised in November 2017 and August 2018 under the New Procurement Framework (NPF), and the "Guidelines on

Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011 and as of July 1, 2016.

94. All goods and non-consulting services will be procured in accordance with the requirements set forth or referred to in the Section VI-Approved Methods: Goods, Works, and Non-Consulting Services of the Procurement Regulations. The Consulting Services will be procured in accordance with the requirements set forth or referred to in the Section VII-Approved Selection Methods: Consulting Services of the Procurement Regulations, the Project Procurement Strategy for Development (PPSD), and the Procurement Plan, approved by the World Bank. The Procurement Plan, including its updates, shall include for each contract: (i) a brief description of the activities/contracts; (ii) selection methods to be applied; (iii) cost estimates; (iv) time schedules; (v) the World Bank's review requirements; (vi) any other relevant procurement information. The Procurement Plan covering the first 18 months of the project implementation was prepared and agreed during negotiations. Any update of the Procurement Plan will be submitted for the World Bank's approval. The Recipient shall use the World Bank's online procurement planning and tracking tools (STEP) to prepare, clear, and update its Procurement Plans and conduct all procurement transactions.

95. All procuring entities as well as bidders, and service providers, i.e. suppliers, contractors, and consultants shall observe the highest standard of ethics during the procurement and execution of contracts financed under the project in accordance with paragraph 3.32 and Annex IV of the Procurement Regulations.

96. When procurement is done in the national market, as agreed in the Procurement Plan, the country's own procurement procedures may be used with the requirements set forth or referred to in paragraphs 5.3 to 5.6 related to National Procurement Procedures.

97. **Project Procurement Strategy for Development (PPSD).** The Recipient (with assistance of the World Bank) has prepared the Project Procurement Strategy for Development (PPSD) which describes how procurement activities will support project operations for the achievement of the project's development objective and deliver Value for Money (VfM). The procurement strategy is linked to the project implementation strategy at country, regional, and international levels, ensuring proper sequencing of the activities. It considers institutional arrangements for procurement; roles and responsibilities; thresholds, procurement methods, prior review, and the requirements for carrying out procurement. It also includes a detailed assessment and description of the NCU of the CAP in charge of procurement and Government capacities for carrying out procurement and managing contract implementation, within an acceptable governance structure and accountability framework. Other issues considered include the behaviors, trends, and capabilities of the market (i.e. Market Analysis) to respond to the procurement plan. The strategy includes a summary on: Procurement Risk, Mitigation Action Plan, Market Analysis, and Procurement Approaches. The PPSD (including procurement plan) has been reviewed by the World Bank.

98. The project procurement risk prior to the mitigation measures is Substantial. The risk can be reduced to a residual rating of Moderate upon consideration of successful implementation of the mitigation measures contained in the action plan for strengthening procurement capacity provided in table 1.6. A detailed description of procurement and institutional arrangements can be found in Annex 1.

D. Safeguards

(i) Environmental Safeguards

99. The project is classified as Environmental Category B as its potential negative environmental and social impacts are site-specific, are not irreversible, and can easily be corrected by appropriate mitigation measures. The project is expected to have positive environmental and social impacts through improved animal husbandry, the

introduction of improved agricultural technologies to increase productivity and soil conservation promotion, and the creation of employment and livelihood opportunities, especially among vulnerable groups, including but not limited to women and youth.

100. The project triggers five environmental and social policies: Environmental Assessment (OP 4.01), Pest Management (OP 4.09), Physical Cultural Resources (OP 4.11), Involuntary Resettlement (OP 4.12), and Projects on International Waterways (OP 7.50). It takes a framework approach to safeguards because the specific locations of its activities have not yet been identified.

101. Project activities will be located in the regions of Diffa, Zinder, Niamey, Tahoua, and Agadez, potentially affecting the Lake Chad basin *via* the Komadougou River, and in Tillabéri and Niamey, potentially affecting the Niger River. The World Bank policy on International Waterways applies to this project as the activities will involve the use of water resources in the Lake Chad and the Niger River basins. The project will likely include rehabilitation, renovation, and minor alteration of small-scale community and household irrigation schemes. Therefore, the World Bank Team has determined that (i) the impacts on quantity and quality of water in the international waterways is negligible, and (ii) that the project investments will not adversely affect the other riparian's possible water use. Accordingly, the exception to the riparian notification requirement based on paragraph 7 (a) of OP 7.50 was approved by the Regional Vice-President for Africa on May 16, 2019.

102. In order to comply with safeguard requirements and to enhance the environmental and social outcomes of the project, the following three environmental and social instruments have been prepared: (i) Environmental and Social Management Framework (ESMF), (ii) Pest Management Plan (PMP), and (iii) Resettlement Policy Framework (RPF). These documents were reviewed and approved by the World Bank. They were disclosed in-country on April 1, 2019, and on the World Bank Website on April 8, 2019, prior to project appraisal.

103. These instruments apply to the entire project and will be used by the National Coordination Unit to screen project activities and prepare site-specific plans (ESIA/EMPS, RAPs) if and when needed. In case of subcomponents 2.2 and 2.3, the selected PFIs will be required to apply the same frameworks (ESMF, RPF, PMP) to screen requests for matching grants, and their capacity to do so is part of their eligibility assessment by the World Bank.

104. Physical cultural resources: Niger is particularly endowed with physical cultural resources, some of which are well known beyond Niger. The project recognizes the importance of these cultural assets in the daily lives of the peoples of Niger and will avoid as much as possible all historical and archaeological sites during implementation. Where chance finds occur in the project's intervention area, the relevant national legislation will be followed on the matter, which includes reporting to the relevant Government authorities to assess the significance and importance of the finds and determine how these are to be handled and safeguarded. Specific provisions are being embedded in the ESMF to set forth the best way possible to satisfactorily manage such situations.

105. The MAGEL has developed experience in implementing the World Bank's safeguards policies, notably through projects such as the Community Action Project 3 (CAP-3), and it is expected that this expertise will be used to guide this project. Furthermore, the NCU will hire qualified, full-time Environmental Safeguard and Social Development Specialists with the role and responsibility of managing environmental and social risks of the project. The National Agency in charge of Environmental Assessments and Impact Studies *(Bureau National d'Évaluation Environmental, BNEE)* has extensive experience monitoring World Bank-funded operations in Niger and has continuously dealt with World Bank safeguard policies, both in terms of project preparation and implementation.

106. In addition, the World Bank's environmental and social safeguard specialists will provide further technical guidance to the NCU through proactive, regular supervision missions and in-field technical capacity strengthening

of the Client's Environmental and Social Safeguard Specialists. Other implementing partners, such as the contractors, will have social and environmental clauses in their contracts to ensure conformity with the environment and social policies triggered under the project.

(ii) Social Safeguards

107. The project is expected to be beneficial to agriculture and livestock producers as well as small and medium enterprises, and processor organizations which will all contribute to increased productivity and increased market access, particularly for the selected agri-food value chains. Proposed project activities by public entities in component 1 (land for demonstration) may lead to land acquisition and restriction of access to sources of livelihood that could result in the economic and possibly physical displacement of project-affected Persons (PAPs). Under Component 2, possible encroachment, contestation of ownership or conflicts over lands may occur in structural works situations like fencing farms, land commonly used for boreholes or other installations, easements and passage corridors that may restrict access of resources. Nevertheless, no resettlement will be allowed under subprojects financed under Component 2 (matching grants scheme). The recipient must, as an eligibility criterion, provide a document in accordance with the regulations in force in Niger (see Rural Code), free of any encroachment or challenge as eligibility criteria. Overall, the Involuntary Resettlement policy (OP/BP 4.12) is triggered as a preventive measure to better manage any issue that may arise in the course of project implementation on the ground. Since footprints of project activities are yet to be known prior to Board approval, the Recipient has prepared a Resettlement Policy Framework (RPF) to provide clear guidance on minimizing land acquisition and related physical or economic displacement; compensating PAPs; rehabilitating livelihoods; addressing grievances; and implementing the RPF through location-specific RAPs or Abbreviated Resettlement Action Plans following the guidelines set out in the RPF. The resettlement process is meant to be inclusive, to encompass vulnerable social groups and guarantee that they receive equitable treatment. The RPF has been reviewed and disclosed publicly in-country (April 1, 2019) and at the World Bank website (April 8, 2019). Likewise, once RAPs or ARAPs are prepared, these will be reviewed and cleared by the World Bank and the Government and disclosed publicly in-country and at the World Bank website.

108. The provision of capacity building programs and access to concessional credit for women and youth will assist this category of beneficiaries to derive greater benefits from the project and improve their socio-economic conditions. Similarly, the project provides for greater participation of women and youth in the management committees set up for project activities since they are the main beneficiaries of project investments.

109. ***Gender and Gender-Based Violence (GBV).*** The World Bank's policy requires that projects assess and contribute to closing gender gaps in access to opportunities, resources and assets, employment, and building capacities. Moreover, mitigating measures should be taken to reduce vulnerability to violence and sexual exploitation. The project will provide direct assistance to women and youth, as well as gender and youth-sensitive training to implementing structures and institutions. This project has undertaken a gender analysis to explore more deeply existing gender gaps and to develop gender-specific approaches to ensure that gender is mainstreamed into the planning and implementation process. The study has established key, gender-disaggregated, indicators for monitoring and evaluation. During the study, relevant gender-focused Non-Governmental Organizations (NGOs), Community-based Organizations (CBOs), and local women and youth will be consulted on how to implement project initiatives and activities.

110. The gender assessment has recommended the project to undertake a gender risk assessment for better implementation of activities. The project will undertake three key measures to minimize and respond to GBV risks and impacts and child labor issues: (i) all bidding documents for works and procurement contracts will include a statement of commitment from bidders to mitigate and address GBV and child labor; winning bidders will commit to action by adopting and observing a code of conduct that prohibits sexual harassment and exploitation as well as child labor throughout the contract's life; (ii) contractors will be required to include GBV, child labor, and HIV/STD issues in their standard job orientation and toolbox meetings for workers; and (iii) in the event that individuals are assaulted, the NCU (working with World Bank safeguards specialists) will support victim's access to justice, health, and psychosocial services despite the fact that the existing socio-cultural and religious structures in Niger make access to such services often constrained by stigma and deep-rooted traditional protocols. The Grievance Redress Mechanism (GRM) to be set up to receive complaints will be structured to promote participation of women and youth. The project will also do Iterative Beneficiary Monitoring and emphasize citizens' engagement (details in Annex 1).

(iii) Citizen Engagement

111. The project will seek to foster active citizen engagement in all its phases. This process will consist of: (i) consultations to integrate beneficiaries' views and decisions in different project interventions; (ii) promotion of IBM; and (iii) operationalizing the GRM. The project will build on these and other mechanisms through a more structured citizen engagement strategy which will target not only the beneficiary groups but also other stakeholders, such as the private sector and NGOs operating in the project zone through direct consultations with beneficiaries, strengthening partnerships, and obtaining their feedback on project implementation. The project will provide periodic reports on citizen engagement activities in close collaboration with the beneficiary communities. Such reports shall include the beneficiaries' feedback on project implementation, the level of beneficiaries' participation in the project, the grievances registered, and whether/how they were addressed. An improved communication strategy will provide timely information and feedback which could be used to improve project performance. The citizen engagement program will employ a variety of tools (focus groups, interviews, client surveys) and personal interactions to reach various audiences while ensuring opportunities for two-way dialogue and for closing the feedback loop.

(iv) Grievance Redress Mechanisms

112. A GRM building on the one from CAP-3 will be established to enable affected communities and individuals to freely lodge complaints or concerns, and with the assurance of a timely and satisfactory resolution of the issue. The mechanism shall build on the local dispute resolution systems in conformity with the RPF, and it will provide multiple channels for soliciting complaints; registering complaints and ensuring a timely acknowledgement, response, and resolution of the complaints in a transparent and solution-driven manner. The GRM will also spell out options for mediation and appeal. Through the GRM, PAPs will be provided a clear and accountable means to raise complaints and seek remedies when they believe they have been harmed by project activities. In each beneficiary community, the Project shall explain how the GRM is expected to work in terms of registering and addressing complaints and the procedure that will be followed to arrive at decisions.

113. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, because of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World

Bank's attention, and World Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

V. KEY RISKS

114. **The project's overall risk rating is Substantial**. Political and governance risks are assessed as High, mainly due to the conflict situation in neighboring countries and displaced persons in the Diffa, Tillabéri, and Tahoua regions. Most other risks are considered Substantial, including those related to the macroeconomic context, sector strategies and policies, technical design of the project, institutional capacity for implementation and sustainability, fiduciary, and stakeholders. The risks associated with environment and social factors are rated as moderate.

115. **Political and governance risks are High,** given the challenging security situation in neighboring Mali, northern Nigeria, and Libya with associated spillover effects. There are also over 100,000 refugees from northern Nigeria in the Diffa region. There are further risks from weak Government capacities as well as national party politics, given some observed radicalization of the political process; elite capture may increase the risk. The PIM will specify who is eligible and who will not be eligible to receive project support (e.g. Government officials and their kin), and that names of all beneficiaries will be published.

116. **Macroeconomic risk is rated Substantial**. Depressed commodity prices and security challenges are risks that may affect the macroeconomic and fiscal situation. While reduced commodity prices would affect revenue, the security challenge and the cost of hosting refugees would deviate spending from economic priorities. The World Bank is financing a DPF series (FY19) to address these risks by promoting growth-enhancing measures and creating incentives for the private sector. The continued implementation of International Monetary Fund (IMF) Extended Credit Facility programs and the macroeconomic anchor offered by Niger's membership in the West African Economic and Monetary Union also help mitigate macroeconomic risks. The assessment of subprojects under Component 2 will include a solid financial analysis, including sensitivity to price changes.

117. **Risks related to Sector Strategy and Policy are rated as Substantial.** Reasons include absent, weak, and/or contradictory legislation and regulations, along with various distortions, such as in the seed sector, which have limited the availability of quality seeds and prevented private sector seed and fertilizer development. Proposed mitigation actions include strengthening the policy planning and regulatory framework as part of Subcomponent 1.3. The project would strengthen MAGEL's efficiency and effectiveness by supporting policy formulation and developing the attendant legislation/regulations for improving the agriculture, livestock, and fisheries regulatory environment. The risk of transboundary diseases is also substantial; agriculture and livestock species are exposed to transboundary diseases that are transmitted within Niger and to/from foreign countries since border surveillance is weak; the project would strengthen the epidemic surveillance system to better prevent and overcome outbreaks.

118. **Risks related to Institutional Capacity for Implementation and Sustainability are assessed as Substantial.** Institutional capacities for project implementation are weak. There is also a risk that financial institutions may have difficulties to lend given their limited access to long-term resources which are necessary to on-lend for investments, and also given the crisis[27] in the microfinance sector. Other specific risks and proposed mitigation

[27] The microfinance sector continues to be in crisis, putting many small depositors at risk. The largest microfinance institution, ASUSU

measures are as follows: The lack of reliable data may limit information on project performance during implementation; a Management and Information System (MIS) would therefore be established to improve gendered data collection during project implementation. To mitigate the risk related to the financial institutions, the project will work with financial institutions which are stable. It is expected that the financial inclusion fund to be put in place by the Government will help mitigate risks related to access to long-term finance.

119. **Fiduciary risk is rated Substantial.** Due to limited Procurement and Financial Management capacity in the Public Sector in Niger, the current fiduciary management arrangements at the NCU under the MAGEL, and the complex nature of the project, the overall fiduciary management risk rating for this project is rated as Substantial. Several actions are proposed in Annex 1 to reduce these risks. Procurement of contracts for World Bank Group projects has sometimes also been subjected to long delays and cases of collusion largely attributable to low level of capacity of local contractors and poor responsiveness of the national system, cumbersome Government procedures, and weak follow-up. Capacity building and close monitoring of the procurement activities will help reduce the delays and mitigate other procurement-related risks.

120. **Stakeholder risk is Substantial**, given the numerous actors engaged at the national, regional, and local levels. This will be mitigated with the project's coordination and institutional development efforts.

121. **Other risks - Security**. Security has been identified as another risk and it is considered substantial. The risk of insecurity in the areas in Diffa, Tillabéri, and Tahoua is substantial and may prevent standard supervisions and/or implementation by Government entities. The project will develop a security risk management system, including building consensus and support with local communities through a response and contingencies in case of conflict-related disruptions.

which holds about 65 percent of the sector total assets is in difficulty. See Annex 2 for details.

VI. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Niger

AGRICULTURAL AND LIVESTOCK TRANSFORMATION PROJECT

Project Development Objectives(s)

The Project Development Objective (PDO) is "to increase agriculture productivity and access to markets for small and medium farmers and agri-food small and medium enterprises in the Participating Project Regions."

Project Development Objective Indicators

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
To increase agriculture productivity								
Increase yield of peppers produced by targeted beneficiaries (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
by female beneficiaries (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
by youth beneficiaries (under 35 years) (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
Increase yield of cowpeas produced by targeted beneficiaries (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
by female beneficiaries (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
by youth beneficiaries (under 35 years) (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
Increase yield of onions produced by targeted beneficiaries (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
by female beneficiaries (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
by youth beneficiaries (under 35 years) (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
Increase yield of cattle meat produced by targeted beneficiaries (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
by female beneficiaries (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
by youth beneficiaries (under 35 years) (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
Increase yield of eggs produced by targeted beneficiaries (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
by female beneficiaries (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00
by youth beneficiaries (under 35 years) (Percentage)		0.00	0.00	5.00	10.00	15.00	20.00	30.00

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
To increase access to markets for small and medium farmers and agri-food SMEs								
Increase in the value of marketed agricultural commodities by project beneficiaries (Percentage)		0.00	0.00	5.00	10.00	20.00	30.00	40.00
by female beneficiaries (Percentage)		0.00	0.00	5.00	10.00	20.00	30.00	40.00
by youth beneficiaries (under 35 years) (Percentage)		0.00	0.00	5.00	10.00	20.00	30.00	40.00

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Component 1: Improving the quality of agriculture support services and policies								
Farmers reached with agricultural assets or services (CRI, Number)		0.00	0.00	1,000.00	3,000.00	5,500.00	8,000.00	10,000.00
Farmers reached with agricultural assets or services - Female (CRI, Number)		0.00	0.00	300.00	1,000.00	1,650.00	2,400.00	3,000.00
Farmers reached with agricultural assets or services - Youth (under 35 years) (Number)		0.00	0.00	300.00	1,000.00	1,650.00	2,400.00	3,000.00

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Number of sectoral policies (crops and/or livestock) developed as a result of the project (Number)		0.00	0.00	0.00	1.00	3.00	5.00	6.00
Beneficiary satisfaction rate with services provided by the project (Percentage)		0.00			70.00			85.00
Beneficiary satisfaction rate with services provided by the project – Female (Percentage)		0.00			70.00			85.00
Beneficiary satisfaction rate with services provided by the project – Youth (Percentage)		0.00			70.00			85.00
Decrease in time between request from declaration of crises to government and making funds available to respond to an eligible crisis (Percentage)		0.00	0.00	0.00	10.00	20.00	35.00	50.00
Component 2: Support to private agriculture investments and to agriculture finance								
Number of matching grants accounts opened as a result of the project grants (Number)		0.00	0.00	250.00	500.00	1,500.00	2,500.00	3,500.00
by female (Number)		0.00	0.00	125.00	225.00	675.00	1,125.00	1,575.00
by youth (Number)		0.00	0.00	125.00	225.00	675.00	1,125.00	1,575.00
Number of loans for starting or expanding an agriculture business as a		0.00	0.00	25.00	50.00	150.00	300.00	500.00

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
result of the project (Number)								
by female (Number)		0.00	0.00	10.00	15.00	45.00	90.00	150.00
by youth (Number)		0.00	0.00	10.00	15.00	45.00	90.00	150.00
Total amount of loans for starting or expanding an agriculture business as a result of the project (Amount(USD))		0.00	0.00	2,000,000.00	5,000,000.00	10,000,000.00	17,000,000.00	23,000,000.00
by female (Amount(USD))		0.00	0.00	500,000.00	1,500,000.00	3,000,000.00	5,100,000.00	6,900,000.00
by youth (Amount(USD))		0.00	0.00	500,000.00	1,500,000.00	3,000,000.00	5,100,000.00	6,900,000.00
Percentage of financed business plans that have met their loan repayment schedule (Percentage)		0.00			85.00			90.00
Number of farmers/entrepreneurs who have benefitted from the productive partnership program (Number)		0.00	0.00	100.00	500.00	1,500.00	3,000.00	4,500.00
Component 3: Project coordination								
Percentage of grievances addressed within 2 weeks (Percentage)		0.00	30.00	90.00	90.00	90.00	90.00	90.00

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Increase yield of peppers produced by targeted beneficiaries	This indicator measures the percentage increase in the yield of peppers per hectare produced by the targeted project beneficiaries who receive training, support services and financing under the project (sub-projects).	Yearly	NCU progress report	Yearly crop surveys administrated with representative sample of targeted project beneficiaries and control group	NCU
by female beneficiaries	For female beneficiaries (the same definition as the above indicator)	Yearly	NCU progress reports	Yearly crop surveys administrated with representative sample of targeted project beneficiaries and control group	NCU
by youth beneficiaries (under 35 years)	For youth beneficiaries from 18 to 35 years old (the same definition as the above indicator)	Yearly	NCU progress reports	Yearly crop surveys administrated with representative sample of targeted project beneficiaries and control group	NCU
Increase yield of cowpeas produced by targeted beneficiaries	This indicator measures the percentage increase in the yield of cowpeas per hectare produced by the targeted project beneficiaries who receive	Yearly	NCU progress reports	Yearly crop surveys administrated with representative sample of targeted project beneficiaries and control group	NCU

	training, support services and financing under the project (sub-projects).				
by female beneficiaries	For female beneficiaries (the same definition as the above indicator)	Yearly	NCU progress reports	Yearly crop surveys administrated with representative sample of targeted project beneficiaries and control group	NCU
by youth beneficiaries (under 35 years)	For youth beneficiaries from 18 to 35 years old (the same definition as the above indicator)	Yearly	NCU progress reports	Yearly crop surveys administrated with representative sample of targeted project beneficiaries and control group	NCU
Increase yield of onions produced by targeted beneficiaries	This indicator measures the percentage increase in the yield of onions per hectare produced by the targeted project beneficiaries who receive training, support services and financing under the project (sub-projects).	Yearly	NCU progress reports	Yearly crop surveys administrated with representative sample of targeted project beneficiaries and control group	NCU
by female beneficiaries	For female beneficiaries (the same definition as the above indicator)	Yearly	NCU progress reports	Yearly crop surveys administrated with representative sample of targeted project beneficiaries and control group	NCU

by youth beneficiaries (under 35 years)	For youth beneficiaries from 18 to 35 years old (the same definition as the above indicator)	Yearly	NCU progress reports	Yearly crop surveys administrated with representative sample of targeted project beneficiaries and control group	NCU
Increase yield of cattle meat produced by targeted beneficiaries	This indicator measures the percentage increase in cattle weight (red meat production) per production cycle among targeted project beneficiaries who receive training, support services (for example, immunizations) and financing under the project (sub-projects).	Yearly	NCU progress report	Yearly animal surveys administrated with representative sample of targeted project beneficiaries and control group	NCU
by female beneficiaries	For female beneficiaries (the same definition as the above indicator)	Yearly	NCU progress reports	Yearly animal surveys administrated with representative sample of targeted project beneficiaries and control group	NCU
by youth beneficiaries (under 35 years)	For youth beneficiaries from 18 to 35 years old (the same definition as the above indicator)	Yearly	NCU progress reports	Yearly animal surveys administrated with representative sample of targeted project beneficiaries and control group	NCU

Increase yield of eggs produced by targeted beneficiaries	This indicator measures the percentage increase in eggs per production cycle among targeted project beneficiaries who receive training, support services (for example, immunizations) and financing under the project (sub-projects).	Yearly	NCU progress reports	Yearly animal surveys administrated with representative sample of targeted project beneficiaries and control group	NCU
by female beneficiaries	For female beneficiaries (the same definition as the above indicator)	Yearly	NCU progress reports	Yearly animal surveys administrated with representative sample of targeted project beneficiaries and control group	NCU
by youth beneficiaries (under 35 years)	For youth beneficiaries from 18 to 35 years old (the same definition as the above indicator)	Yearly	NCU progress reports	Yearly animal surveys administrated with representative sample of targeted project beneficiaries and control group	NCU
Increase in the value of marketed agricultural commodities by project beneficiaries	This measures the increase in the total value of marketed production in targeted crops and breeds. It is assessed as aggregate value of sales for individual (targeted) crop and livestock commodities. This indicator	Yearly	NCU progress reports	Yearly survey of representative sample of project beneficiaries and control group	NCU

	is assessed on beneficiaries who receive training, support services (for example, immunizations) and financing under the project. The indicator will be measured in constant prices.				
by female beneficiaries	For female beneficiaries (the same definition as the above indicator)	Yearly	NCU progress reports	Yearly survey of representative sample of project beneficiaries and control group	NCU
by youth beneficiaries (under 35 years)	For youth beneficiaries from 18 to 35 years old (the same definition as the above indicator)	Yearly	NCU progress reports	Yearly survey of representative sample of project beneficiaries and control group	NCU

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Farmers reached with agricultural assets or services	This indicator measures the number of farmers who were provided with agricultural assets or services as a result of World Bank project support. "Agriculture" or "Agricultural" includes:	Yearly	NCU progress reports	Grant approval records and incremental advisory services delivery statistics against planned programming.	NCU

	crops, livestock, capture fisheries, aquaculture, agroforestry, timber, and non-timber forest products. Assets include property, biological assets, and farm and processing equipment. Biological assets may include animal agriculture breeds (e.g., livestock, fisheries) and genetic material of livestock, crops, trees, and shrubs (including fiber and fuel crops). Services include research, extension, training, education, ICTs, inputs (e.g., fertilizers, pesticides, labor), production-related services (e.g., soil testing, animal health/veterinary services), phyto-sanitary and food safety services, agricultural marketing support services (e.g., price monitoring, export promotion), access to farm and post-harvest machinery and storage facilities, employment, irrigation and drainage, and finance. Farmers are people engaged in agricultural				

	activities or members of an agriculture-related business (disaggregated by men and women) targeted by the project.				
Farmers reached with agricultural assets or services - Female		Yearly	NCU progress reports	Grant approval records and incremental advisory services delivery statistics against planned programming	NCU
Farmers reached with agricultural assets or services - Youth (under 35 years)	This indicator will measure farmers under 35 years reached with agricultural assets or services. This is a supplement of the CRI, Farmers reached with agricultural assets or services.	Yearly	NCU progress reports	Grant approval records and incremental advisory services delivery statistics against planned programming	NCU
Number of sectoral policies (crops and/or livestock) developed as a result of the project	Policies developed must be specific to the agriculture/livestock/aquaculture sectors or directly apply to one of these sectors	Yearly	MAGEL	Notice of policy development and enforcement	NCU
Beneficiary satisfaction rate with services provided by the project	Percentage of beneficiaries who express satisfaction with the services provided in the project areas based on formal surveys (carried out twice throughout the	At mid-term and at the end of the project	NCU progress reports	Survey of a representative sample of project beneficiaries and control group	NCU

	life of the project : at mid-term and at the end of the project). The sample should be representative of the total number of project beneficiaries.				
Beneficiary satisfaction rate with services provided by the project – Female	Percentage of female beneficiaries who express satisfaction with the services provided in the project areas based on formal surveys. The sample should be representative of the total number of project female beneficiaries.	At mid-term and end of the project	NCU progress reports	Survey of a representative sample of female project beneficiaries and control group	NCU
Beneficiary satisfaction rate with services provided by the project – Youth	Percentage of young beneficiaries (below the age of 35) who express satisfaction with the services provided in the project areas based on formal surveys. The sample should be representative of the total number of project young beneficiaries.	At mid-term and end of the project	NCU progress reports	Survey of a representative sample of young project beneficiaries and control group	NCU
Decrease in time between request from declaration of crises to government and making funds available to respond to an eligible crisis	This indicator will measure the decrease in the response time estimated in case of crisis.	Yearly	NCU progress reports	Response time will be measured in case of actual crisis. If there is no crisis, sumilations will be done to provide an estimate response time.	NCU

Number of matching grants accounts opened as a result of the project grants	This indicator will measure increased access to matching grants and opened accounts by beneficiaries in FCV areas.	Yearly	NCU progress reports	Surveys and interviews at partner financial institutions	NCU
by female	This indicator will measure increased access to matching grants and opened accounts by female beneficiaries in FCV areas.	Yearly	NCU progress reports	Surveys and interviews at partner financial institutions	NCU
by youth	This indicator will measure increased access to matching grants and opened accounts by youth beneficiaries in FCV areas.	Yearly	NCU progress reports	Surveys and interviews at partner financial institutions	NCU
Number of loans for starting or expanding an agriculture business as a result of the project	This indicator will measure use of loans for an agriculture/livestock business as a result of access to agriculture finance through the project.	Yearly	NCU progress reports	Yearly survey of project beneficiaries and control group	NCU
by female	This indicator will measure female and youth's use of loans for an agriculture/livestock business as a result of access to agriculture finance through the project.	Yearly	NCU progress reports	Yearly survey of project beneficiaries and control group	NCU
by youth	This indicator will measure female and youth's use of	Yearly	NCU progress reports	Yearly survey of project beneficiaries and	NCU

	loans for an agriculture/livestock business as a result of access to agriculture finance through the project.			control group	
Total amount of loans for starting or expanding an agriculture business as a result of the project	This indicator will measure use of loans for an agriculture/livestock business as a result of access to agriculture finance through the project.	Yearly	NCU progress reports	Yearly survey of project beneficiaries and control group	NCU
by female	This indicator will measure female's use of loans for an agriculture/livestock business as a result of access to agriculture finance through the project.	Yearly	NCU progress reports	Yearly survey of project beneficiaries and control group	NCU
by youth	This indicator will measure youth's use of loans for an agriculture/livestock business as a result of access to agriculture finance through the project.	Yearly	NCU progress reports	Yearly survey of project beneficiaries and control group	NCU
Percentage of financed business plans that have met their loan repayment schedule	Loan repayment according to planned schedule among targeted beneficiaries of credit facilitation matching grants.	At mid-term and at project closure	Partner Financial Institutions	Surveys and interviews at PFIs	NCU
Number of farmers/entrepreneurs who have benefitted from the productive partnership program	This indicator will measure number of farmers/entrepreneurs who have benefitted from the	Yearly	NCU progress reports	Surveys and interviews at partner financial institutions	NCU

	productive partnership program.				
Percentage of grievances addressed within 2 weeks	NCU will respond grievance within 2 weeks.	bi-annually	Records of grievance	NCU records all received grievance	NCU

Annex 1: Implementation Arrangements

A. Project Institutional and Implementation Arrangements

1. The Ministry of Agriculture and Livestock (MAGEL) will have overall responsibility for the implementation of the project. The duration of Project implementation will be six years. The daily implementation of the project will be ensured by the National Coordination Unit (NCU) of the Community Action Program (CAP) which is under the oversight of MAGEL.

Project Oversight

2. At the national level, a PSC will be set up to act as a higher-level guidance body that will meet semi-annually. It will oversee the project, approve the AWPB, as well as the project's progress reports, and ensure that the project objectives are being met. The PSC will ensure coherence between the project and other projects, funded by the World Bank or other development partners, in the sector. It will be chaired by the Secretary General of the MAGEL. The Secretariat of the PSC will be provided by the Project Coordinator. The PSC will be composed of representatives of the entities involved in the implementation of the project. They include the Ministry of Agriculture and Livestock, the Ministry of Environment and Sustainable Development, the Ministry of Commerce and Private Sector Development, the Ministry of Plan, the Ministry of Finance, the Ministry of Youth Employment, the Ministry of Interior, Public Security, Decentralization, Traditions and Religious Affairs, the High Secretariat for Initiative 3N, the Ministry of Infrastructure and Transport, the Network of National Chamber of Agriculture,[28] and Civil Society Organizations. Table 1.1 below shows the role of different entities involved in the project implementation.

Table 1.1: Roles of different Ministries and Agencies in Project Implementation

Ministry/ Agency	Role in the project implementation
Component 1: Improving the quality of agriculture support services and policies	
Ministry of Agriculture and Livestock	Different directorates in the ministry will provide contribution in the implementation of activities under component 1 - The Directorates of Agriculture and of Rural Engineering will support the work related to extension services and dissemination of technologies under subcomponent 1.1, with the rural engineering focusing on irrigation - The General Directorates of Plant Protection and of Veterinary Services will provide support in the implementation of subcomponent 1.2. - The Directorate of Programs will be involved in the implementation of subcomponent 1.3
Ministry of Environment and Sustainable Development	- The Directorate of Fisheries and Aquaculture will provide support related to aquaculture under subcomponent 1.2
Component 2: Increasing investments in agricultural production, processing and market access	
Ministry of Commerce and Private Sector Development	This Ministry will be involved in the implementation of Subcomponent 2.1, as a member of the National Selection Committee.

[28] Association of all agriculture cooperatives in the countries.

Ministry of Finance	This Ministry will support the implementation of subcomponents 2.1 as a member of the National Selection Committee as well as 2.2 and 2.3.
High Secretariat for Initiative 3N	As the host of the FISAN, the High Secretariat will be involved in subcomponent 2.1 as member of the National Selection Committee.
Cross-cutting roles and coordination	
Ministry of Agriculture and Livestock	The implementing coordinating Ministry will have overall oversight of all aspects of project implementation.
National Chamber of Agriculture	The National Chamber of Agriculture will be involved as a member of the National Selection Committee.

Project Implementation

3. Project management and coordination will be done by an NCU under the MAGEL. Given its track record, its wide geographic coverage, its staffing, and to avoid delays in project start up, it was agreed by the Ministry of Plan, the MAGEL, and the High Commissariat for Initiative 3N that the NCU of CAP be responsible for coordinating and managing the project. The NCU of CAP has gathered strong and wide experience in preparing and managing World Bank-financed projects. It will be responsible for day-to-day management of the project, including the preparation of the Annual Work Plans and Budgets, procurement, financial management, follow-up and implementation of environmental and social safeguards measures, monitoring and evaluation of project outputs and outcomes, and general implementation of project activities. It will be reporting to the Project Steering Committee.

4. At the national level, the NCU will have a coordinator, a fiduciary, safeguards, technical, and M&E teams to coordinate the day-to-day implementation of different components of the project. The current NCU have already some of the staff, but the team will need to be strengthened by adding some technical positions including a technical director, an agri-finance specialist, an agri-business specialist, and a social safeguard specialist. The proposed structure is provided in Figure 1.1 below. The agri-finance specialist will report to the NCU and also liaise frequently with the Ministry of Finance to ensure coherence with the country’s other activities related to financial inclusion.

5. For fiduciary staff, including Financial Management, Procurement, and Environmental and Social Safeguards, an evaluation of the current staff will be conducted by MAGEL before effectiveness. Regarding procurement, a procurement assistant will be added to the existing team.

6. The project staff will be recruited competitively and will have the status of consultants. They will be financed with the resources of the project. Additional specialists will be hired as deemed necessary during implementation. The hiring process will target experienced staff with proven credentials in their areas of competence and who are familiar with World Bank and/or other donors’ procedures. The performance of the entire NCU team will be evaluated annually. The National Coordinator will sign a performance contract with the supervising ministry (MAGEL), while contracts of the other members of the NCU will be signed with the National Coordinator on behalf of the MAGEL.

7. At the regional level, CAP already has Regional Coordination Units (RCUs) covering the eight regions of the country. Each RCU is led by a Regional Coordinator, and comprises a regional M&E specialist, a regional accountant, a regional internal auditor, and a regional private sector specialist. These staff will be in charge of the implementation of the project at the regional level. Each RCU will report to the NCU. An evaluation of the capacity

of each RCU will be conducted before project effectiveness in order to assess their capacities and, as necessary, add new competencies to implement the project on the ground before project start-up. A detailed description of project implementation arrangements will be included in the PIM.

8. Under Subcomponent 2.3, the PCG fund will be managed by two independent fund administrators, who will be reporting to the NCU and the Ministry of Finance (which has the authority over all financial inclusion topics).

9. The project will implement the RSF under subcomponent 2.3 through IFC, in accordance with a Risk Sharing Facility Framework Agreement between IDA, IFC, and the MAGEL. The NCU will entrust IFC to open and maintain, on behalf of the Recipient, an account on terms and conditions satisfactory to the Association (the Risk Sharing Facility Account). Deposits into, and payments out of the Risk Sharing Facility Account shall be made in accordance with the terms and conditions set forth under the IFC RSF Establishment Agreement. The proceeds of the financing deposited in the Risk Sharing Facility Account shall be used exclusively for eligible expenditures in accordance with the terms of the legal agreements.

10. The other US$3 million under the RSF will be managed by an independent firm (Fund Manager) to be recruited by the project under a special account. This Fund Manager will work with SAHFI pursuant to a legal agreement between the MAGEL, SAHFI, and the LRSF Manager (the “Local Risk-Sharing Facility Establishment Agreement”). The Fund Manager will be selected through an international competitive bidding process. The Fund Manager will have a performance-based contract that will balance outreach and sustainability. The NCU will conduct oversight of the Fund Manager. The Fund Manager will have the fiduciary responsibility of the guarantees financed by the PCG fund as a delegated management contractor and SAHFI will manage the balance of project funds and be responsible for overall financial reporting to the NCU. The Fund Manager will develop actions to evaluate and measure the risk of guaranteed credits, exercise control on all operations arising from the administration of the PCG fund, ensure compliance with the regulations governing the PCG fund, study and propose regulatory and administrative changes that help optimize the use of the PCG fund, develop commercial dissemination functions.

11. All the PFIs involved in the CSF will be selected based on financial and prudential indicators, and minimum performance ratios. PFIs must maintain adequate prudential ratios relating to capital adequacy, asset quality, and liquidity to be considered eligible. Only PFIs licensed and supervised by the Regional Central bank (BCEAO) will be eligible to participate. The selected PFIs should have and use internal environmental and social safeguards systems that comply with the national and World Bank environment and social policies. Two PFI have already been selected, and others to be selected by the project will be subject to ‘no-objection’ by the World Bank. All PFI selected will enter into a legal “Participation Agreement” with the MAGEL and in a Partial Credit Guarantee Agreement with either IFC or SAHFI.

B. Monitoring and Evaluation

12. The Results Framework defines the performance indicators at the PDO level and for key project activities. The NCU has the overall responsibility for producing progress reports. It was agreed that reporting will be done quarterly the first years of implementation up to the Mid-Term Review (MTR), which will be carried out no later than three years after effectiveness and that the MTR will reassess the periodicity of project implementation reports. The M&E system will be designed to link technical and financial data on the project’s implementation progress. It will serve as a mechanism to assess progress toward project outcomes and as a day-to-day management tool. It will also support project supervision by ensuring that baseline and follow-up surveys and data collection for key performance indicators are available and regularly updated. A baseline survey will be conducted during the first year of the project to establish the project reference data and verify targets.

13. Progress reports will be produced every quarter for physical implementation and results monitoring. Semiannual and annual reports will be circulated to sector ministries and development partners involved. Semiannual joint supervision missions with representatives from the World Bank and the Government of Niger will ensure compliance with legal covenants and assess the status of key project outcomes. A Midterm Review (MTR) will be conducted no later than three years after effectiveness. A final independent evaluation will be conducted in the last semester of project implementation to assess overall achievement of expected project results. Due to the weak implementation capacity and the fragility context, the project will produce quarterly reports in the first phase of implementation to allow highlighting any implementation issues sooner and provide remedial solution in timely manner; this reporting schedule will be reviewed during the MTR.

14. The collection of data on gendered baseline indicators will be conducted as part of the baseline survey which will be carried out in the first year of project implementation. This exercise, in addition, will provide line ministries and local authorities information to monitor how needs are being addressed overall by the project and by other initiatives. At the same time, the M&E system will be a means to generate much-needed quantitative and qualitative data on project-targeted individuals and communities.

15. In areas difficult to reach due to insecurity or conflict, the proposed project will use "Enhanced Monitoring and Evaluation" to monitor implementation progress for ongoing investments by geo-enabled methods and supplemented by community discussions. This monitoring will be provided by national NGOs or firms, hired and trained by the NCU to collect and send just-in-time information via mobile apps/tablets to the NCU, building on the geo-tagging adopted during the activities' selection process.

16. The project will also use the Iterative Beneficiary Monitoring (IBM) approach – a feedback mechanism which collects qualitative information about deliverables on regular basis through the uses of existing survey mechanisms. The IBM System collects information directly from beneficiaries and produces frequent, short reports that can be useful in identifying emerging issues on the ground.

17. The M&E section of the PIM will provide details about the definition of the Results Framework, the methodology and the instruments to be used for data collection, the institutional arrangements for M&E functions (identification of actors and definition of their respective responsibilities), the Grievance Redress Mechanisms, and the mechanism to be used for disseminating information. M&E results will inform a communication strategy that will be developed and implemented by the NCU. A baseline survey that will include both treatment and control groups to ensure attribution of project impacts will be conducted during the first year of the Project to verify the baseline data and targets presented in the Results Framework. Moreover, an M&E mechanism will be set up to monitor emergency response activities.

Complementarity with other projects

18. **Complementarity of PIMELAN with the Regional Sahel Pastoralism Support Project in Niger (PRAPS; P147674).** PRAPS is a regional operation, currently implemented in the six Sahelian countries (including Niger) to support improved productivity, sustainability, and resilience of pastoral livelihoods. PRAPS-Niger concentrates on pastoral activities that sustainably raise the incomes of pastoral and agro-pastoral groups by improving animal health, managing rangeland and water resources, facilitating live animal market access, and preventing and managing pastoral crises. PRAPS is active in Niger's pastoral area, which covers a large part of the national territory. The proposed PIMELAN complements PRAPS by focusing on sedentary livestock systems instead of transhumant ruminant herding. The two projects have overlapping geographical boundaries but target different beneficiaries. They also have operational complementarities touching *inter alia* upon animal health, feed production and supplementation, access to market information, as well as livestock sector crisis prevention and management. PRAPS and PIMELAN will pool technical expertise, share managerial capacities, and will coordinate, so that the two

projects operate in synergy, without duplicating activities, hence ensuring a livestock sector-wide approach within MAGEL. Given the demand-driven approach, the proportion of various types of investments is not predetermined, but it will likely include rehabilitation, renovation and minor alteration of small-scale community and household irrigation schemes, livestock development, and marketing interventions.

19. **Complementarity of PIMELAN with the Climate-Smart Agriculture Support Project (P153420).** The Niger Climate-Smart Agriculture (CSA) Support project is intervening in 60 communes, among others to increase small-scale irrigation, promote livestock and other high potential value chains (dairy, poultry, crops, vegetables, aquaculture, fruits trees, animal feeds), and promote mechanization to improve market access. PIMELAN will focus mainly on profitable business plans in any livestock and agriculture value chain of particular importance for women and youth in the project areas. The two projects will closely coordinate at the level of regions and Communes where both projects will be active.

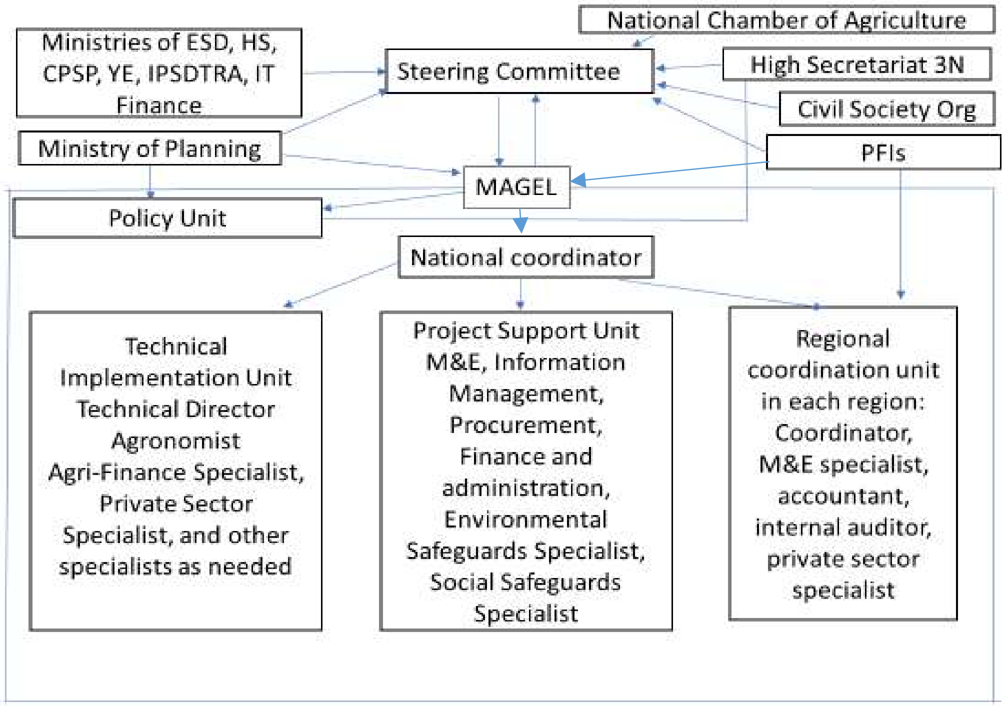
20. **Synergy between PIMELAN and the Rural Mobility and Connectivity Project (P164498).** PIMELAN will seek synergy with the Rural Mobility and Connectivity project. While that project has already planned its first phase activities in connection with the PASEC, the roads it would work on during the second phase have not yet been identified. The already agreed selection criteria of the second phase are priority impassable rural roads (about 320 km) that are either (i) part of the pepper alternate trade routes to Nigeria or (ii) road access to where a concentration of physical investments is expected related to PIMELAN. Therefore, using these two criteria, the Ministry of Transport will work closely with the PIMELAN team in MAGEL to identify and select the specific road segments that would be key to the transportation of agricultural, livestock, and fish products from production areas towards markets.

21. **Complementarity with the Smart Villages for Rural Growth and Digital Inclusion Project (P167543).** The project will support extension of digital financial services to farmers and women (in particular digital payments) in 700 villages in rural areas. For that the project will provide digital platforms to selected agricultural federations,[29] and to the largest agriculture input supplier and its wholesalers to catalyze the adoption of digital payments among producers. The project will also support the development of credit infrastructure (by using credit scoring based on traceability of farmers' digital transactions among other information on the farmers) to facilitate farmers' access to credit. The PFIs under PIMELAN will work directly with Smart Villages to use the new credit scoring system developed under Smart Villages and the federations in the value chains targeted by PIMELAN will be given access to digital payments under Smart Villages.

22. **Summary institutional responsibilities for project implementation.** Table 1.1 presents the summary responsibilities for the implementation of the project components and subcomponents, and Figure 1.1 describes the NCU setup.

[29] Agriculture federation is defined as the groups of agriculture cooperatives producing similar products.

Figure 1.1: Institutional Setup



C. Financial Management and Disbursements

23. The World Bank conducted a financial management assessment of the implementing entity of the project, that is, the National Coordination Unit (NCU) of the Community Actions Program (CAP). The NCU is currently managing Phase 3 of Community Actions Program (CAP-3, P132306). The FM performance and the FM risk for the ongoing CAP-3 (P132306) managed by NCU were rated respectively satisfactory and substantial following the last supervision mission conducted in May 2018. Fiduciary compliance is also deemed satisfactory. For example, the interim non-audited financial reports (IFRs) have been submitted on time, with acceptable quality. The last audited financial statements, for the fiscal year ending December 31, 2017, were submitted to the World Bank in a timely manner. However, the auditors issued a qualified opinion due to: (i) absence of timely and adequate justification of the balance of the accounts receivable, including mission advances; (ii) the inventory of the project's fixed assets was not complete at the time of the audit; and (iii) the discrepancy between the expenditures reported in the financial statements and the trail balance. The project has submitted an Action Plan to address these issues. The Action Plan was found acceptable to the World Bank.

24. The conclusion of the assessment is that the financial management residual risk for NCU is Substantial. Although the financial management arrangements satisfy the World Bank's minimum requirements under World Bank Policy and Procedures for IPF operations, improvements are needed for the project's FM system to be adequate to provide, with reasonable assurance, accurate and timely information on the status of the project as required by IDA. Key undertakings to be fulfilled by NCU include: (i) Prior to effectiveness, a consultant will be recruited to review and refine the TORs of the current FM staff to properly handle the activities under the project; (ii) at the latest by effectiveness, a PIM satisfactory to the World Bank will be finalized; (iii) by effectiveness, as part

of the PIM, an update of the administrative, financial and accounting procedures manual used under CAP-3 will be necessary, to incorporate the activities of PIMELAN. In addition, other actions are expected to be completed. They include (i) within three months of effectiveness, the internal audit team must be strengthened by recruiting a junior internal auditor; (ii) within three months of effectiveness, the accounting software must be upgraded to include PIMELAN in order to ensure timely production of semi-annual and annual financial statements; and (iii) within five months of effectiveness, an external auditor must be appointed based on terms of reference acceptable to the World Bank, to audit the project's annual financial statements.

25. Table 1.2 below shows the results of the risk assessment from the Risk Rating Summary and identifies the key risks the project's financial management system may face in achieving project objectives. It also provides a basis for determining how project management should address these risks.

Table 1.2: PIMELAN - Risk and Mitigation

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Implementation	Conditions/ Covenants (Y/N)	Overall Residual Risk rating
		Inherent Risk		
Country level: Risk of delay in implementing the recently adopted public financial management (PFM) plan on improvement of quality of PFM. Corruption and poor governance may affect public sector performance.	S	Joint donor and Government regular review and evaluation of implementation progress of the PFM Action Plan. The strengthening of public financial management through the WB-funded Niger Public Sector Capacity and Performance for Service Delivery project (P145261) is expected to contribute to enhancing the PFM system to provide timely and reliable information and improve governance in Niger. Continued World Bank policy dialogue through the DPO series which includes triggers linked to PFM reforms. A number of institutions to help fight corruption have been set up and are currently operational. Some of these institutions include: The Procurement Regulatory Agency (ARMP), the High Commission of Anti-Corruption (HALCIA), and the General Inspection of Government Services.		S
Entity level: Weak Capacity and substantial risk of political interference.	S	Establish and clearly outline the role of the Ministries and institution involved in the implementation of project activities in the PIM and the administrative, financial, and accounting manual of procedures and in relevant legal texts. The role of other institutions involved in project activities implementation will also be clarified.	Y - before project effectiveness	S

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Implementation	Conditions/ Covenants (Y/N)	Overall Residual Risk rating
Project level: The project is complex with the involvement of a large number of dispersed entities with a mix of large and small amounts of disbursement. The project involves all 8 regions, many communities, and the private sector.	S	The PIM as well as the administrative, financial, and accounting procedures manual for this project will stipulate the respective responsibilities of players in the project. NCU has experience in managing World Bank-financed projects. Continuous training and capacity building will be conducted.	Y – the PIM will be elaborated and adopted before project effectiveness N – It is expected that the administrative, financial, and accounting procedures manual used under CAP 3 will be updated within 3 months of project effectiveness	S
Inherent Risk	**S**			**S**
		Control Risk		
Budgeting: Low budget execution due to slow process of collecting information from the regions and the communes. Lack of satisfactory variance analysis to monitor budget implementation may also be a risk.	S	Alignment of the procurement plan and budget forecast to be done on a regular basis by NCU. The Steering Committee will review and approve the work plans and annual budgets at the beginning of every year. NCU will issue on an annual basis the budget calendar circular in time to ensure that all project participants have enough time to produce budgets. Variance analysis will be part of the IFR content.		S
Accounting: High turnover of staff, mainly in the regions. There is also the risk of delay in recording of transactions.	S	NCU will recruit a consultant to review and refine the ToRs of the current FM staff to include PIMELAN activities. The financial management manual will clearly describe the accounting policy. New staff will be trained on the manual and also on World Bank procedures.	N – Expected before project effectiveness N – Expected within 3 months of effectiveness	M

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Implementation	Conditions/ Covenants (Y/N)	Overall Residual Risk rating
Accounting of beneficiaries' contribution may be weak.		Accounting of beneficiaries' contributions will be laid out in detail in the manual.	N - Expected within 3 months of effectiveness	
Internal Controls and Internal Audit Inadequate internal controls to sufficiently cover the requirements of activities under the project. Internal audit function is weak	S	Clearly outline, describe, and document policies and procedures in an administrative, accounting, and financial procedures manual for project implementation ensuring segregation of duties. It is expected that the capacity building under component 3 will enhance the effectiveness of the current internal audit functions at the NCU as well as the regional level. NCU will recruit a junior internal auditor based on TORs acceptable to the World Bank	N – Expected within 3 months of effectiveness N – Expected within 3 months of project effectiveness	S
Funds Flow There may be delays in flow of funds to the lowest implementation levels. Funds flow arrangements may not be well understood by beneficiaries leading to delays in funds transfer.	S	A Designated Account will be opened at a commercial bank acceptable to the World Bank into which project funds will be deposited. A project transaction account will be opened in commercial banks at the regional levels. Using the simplified administrative, financial, and accounting procedures manual, the NCU and RCUs will train the beneficiaries on the procedures related to activities in PIMELAN activities. Close supervision by World Bank and other Development Partners.	N – Expected within 1 month of project effectiveness	M
Financial Reporting Involvement of several implementing entities and the high volume of information to be processed may delay the preparation of IFRs and annual financial	S	Regular training on the preparation on IFRs will be conducted by World Bank and NCU through the capacity building program under component 3 of this project. Close follow-up of World Bank and other Development Partners will be made.		M

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Implementation	Conditions/ Covenants (Y/N)	Overall Residual Risk rating
statements for the audit.				
Auditing Because of the involvement of a number of implementing entities all over the country, delays in preparation of financial accounts for consolidation necessary for submission of external audit reports could be encountered.	S	Follow up on timely recruitment of auditors and timely closure of accounts will be made. The project FM specialist will establish an annual calendar for the accounts closure and preparation of IFRs and annual financial statements that will be communicated to all the regional accountants and internal controllers. Clearly outline, describe, and document policies and procedures in an administrative, financial, and accounting procedures manual for project implementation ensuring segregation of duties.	N- Expected within 5 months of effectiveness Y- before effectiveness	S
Control Risk	**S**			**M**
Overall FM Risk Rating	**S**	The functioning of all these FM arrangements and mitigating measures outlined above will be followed up by effectiveness and during supervision missions.		**S**

H=High; S= Substantial; M= Moderate; L=Low

26. In view of the general country financial management issues, the current financial management arrangements at the NCU under the Ministry of Agriculture and Livestock, and the complex nature of the project due to its high degree of decentralization, the overall financial management risk rating for this project is rated as Substantial.

Strengths of Financial Management

27. The NCU as well as the RCUs of the Phase 3 Community Actions Program, have a track record in implementing World Bank-funded projects. In addition, the NCU has (i) developed an administrative, financial, and accounting procedures manual; (ii) developed a computerized accounting system at the NCU as well as at the RCU level; and (iii) qualified and experienced staff at both the national and the regional levels.

Weaknesses and Action Plan

28. The following actions need to be taken to enhance the financial management arrangements for the Project:

Table 1.3: PIMELAN – FM Action Plan

Weakness	Action	Responsible	Deadline
Existing FM staff have been recruited under CAP 3 and may not cover the activities of the project	Review and refine ToRs of the existing FM staff to include the activities under the proposed project.	NCU	Before effectiveness
Existing accounting system not migrated to cover the needs for this project	Migrate the existing TomPro accounting software to fit the needs of PIMELAN	NCU	Within 3 months of effectiveness
Weaknesses identified in the internal control system	Elaborate and adopt the PIM including the M&E aspects; (i) elaborate and adopt the detailed matching grants procedures under the GM; and (ii) elaborate and adopt the RSFM. Update the existing administrative, financial, and accounting procedures manual to improve control over assets.	NCU NCU	Before the project effectiveness Within 3 months of project effectiveness
Internal audit staff not sufficient to handle the proposed project's activities	Recruit a junior internal auditor at the national level.	NCU	Within 3 months of effectiveness
Absence of external audit arrangements	Recruit or appoint an external auditor to audit the financial statements of the project.	NCU	Within 5 months of effectiveness.

Budgeting Arrangements

29. The budget process will be clearly stipulated in the updated administrative, financial, and accounting procedures manual. Annual budget and work plans for the project will be coordinated and prepared by the NCU and reviewed and adopted by the project Steering Committee before the beginning of the year, that is, not later than November 30 each year. Annual budgets adopted by the Steering Committee will be submitted to the World Bank for no-objection before implementation. Budgets should be regularly monitored at all levels. The approved annual budget of the project should be at least monitored quarterly against actual expenditures by the NCU. The budget variances will be adequately explained and justified through the semi-annual IFRs.

Accounting Arrangements

30. ***Accounting policies and procedures***: The current accounting standards in use in West and Central African Francophone countries for on-going World Bank-financed projects will be applicable. SYSCOHADA is the assigned accounting system in West and Central African Francophone countries. Project accounts will be maintained on an accrual basis, supported with appropriate records and procedures to track commitments and to safeguard assets. The administrative, financial, and accounting procedures manual will be updated and will detail and document the project accounting, policies, and procedures. The accounting software will be programmed to facilitate processing of financial information and to prepare interim financial statements as well as annual financial statements. Detailed FM documentation will be maintained in the project files for the implementing entities.

31. ***FM manuals***: The NCU is using an administrative, financial, and accounting procedures manual for the Community Action Program Phase 3 (P132306). As part of its PIM, PIMELAN will develop a procedures' manual by effectiveness.

32. ***Staffing arrangements***: The current FM team under the ongoing CAP 3 is comprised of one FM specialist, two accountants, and three accounting assistants at the national level and one accountant at each of the eight RCUs. There is no need to recruit additional FM staff for this project. In addition, to properly handle the activities of PIMELAN, before project effectiveness, a consultant will be recruited to review and refine the TORs of the current FM staff to include the activities of the proposed project. The FM team at both national and regional levels will be responsible for collecting and controlling the invoices, maintaining the books of account, processing financial data, and making payments to suppliers and service providers. The FM team at the national level will be responsible for monitoring the approved budget and preparing the semi-annual interim financial reports (IFRs) and annual financial statements for the annual audit.

33. ***Accounting Software***: Under the ongoing World Bank-funded CAP-3 (P132306), the NCU uses the TomPro accounting system under the multi-project, multi-donors, and multi-sites version, which is widely used in the country and capable of recording transactions and reporting on project operations in a timely manner, including preparation of withdrawal applications and periodic financial reports (IFRs and annual financial statements). However, it is expected that, within three (3) months of the project effectiveness, the NCU will migrate the existing accounting software to fit the project needs.

Internal Control and Internal Audit Arrangements

34. Internal control comprises the whole system of control, financial or otherwise, established by management to (i) carry out the project activities in an orderly and efficient manner; (ii) ensure adherence to policies and procedures; (iii) ensure maintenance of complete and accurate accounting records; and (iv) safeguard the assets of the project. For this project, the NCU will follow the administrative, financial, and accounting procedures which will be part of the PIM. It will also include procedures related to authorization, recording, and custody controls. The PIM will document the FM and disbursement arrangements, including internal controls, budget process, assets safeguards, and clarify roles and responsibilities of all the stakeholders.

Financial Reporting Arrangements

35. **The NCU will prepare semi-annual interim unaudited financial reports (IFRs).** These will be submitted to the World Bank within 45 days of the end of the semester. The format and the content, consistent with the World Bank's standards, was agreed between the World Bank and the Recipient during project negotiations. At a minimum, the financial report will include: (a) a statement of sources and uses of funds and opening and closing balances for the semester and cumulative; (b) a statement of uses of fund that shows actual expenditures appropriately classified by main project activities (categories, subcomponents), including a comparison with budgets for the semester and cumulative; (c) a statement on movements (inflows and outflows) of the project Designated Account (DA), including opening and closing balances; (d) a statement of expenditure forecast for the next semester, together with the cash requirement; (e) notes and explanations; and (f) other supporting schedules and documents.

36. The NCU will also prepare the project's annual accounts/financial statements within three (3) months after the end of the accounting year in accordance with the accounting system implemented in the sub-region (SYSCOHADA). The audited financial statements should be submitted to the World Bank within six (6) months after the end of the accounting year.

Auditing Arrangements

37. The NCU will have the project's financial statements audited by auditors with independence and capacity acceptable to the World Bank, under terms of reference acceptable to the World Bank. It is expected that the external auditors will be recruited within five (5) months of effectiveness. Since the life span of the project is six (6) years, the independent auditor will be rotated during the third year to maintain the independence of the auditor. The external auditor will submit the audit report in a form and content satisfactory to the World Bank within six (6) months of the end of the year. The TORs for the external audit were agreed during the negotiations and will be attached to this report. The NCU and all project institutions will take the necessary follow-up actions on the audit reports. The NCU will submit the consolidated response to the findings in the annual financial audit report to the World Bank along with an action plan for any follow-up actions.

38. Audit reports to be submitted are summarized below:

Report	Responsible Agency	Due Date
Audited Project Financial Statements and audit opinion thereon for each fiscal year (including Management letter)	NCU	Within **six (6) months** after the end of each financial year.

Disbursements

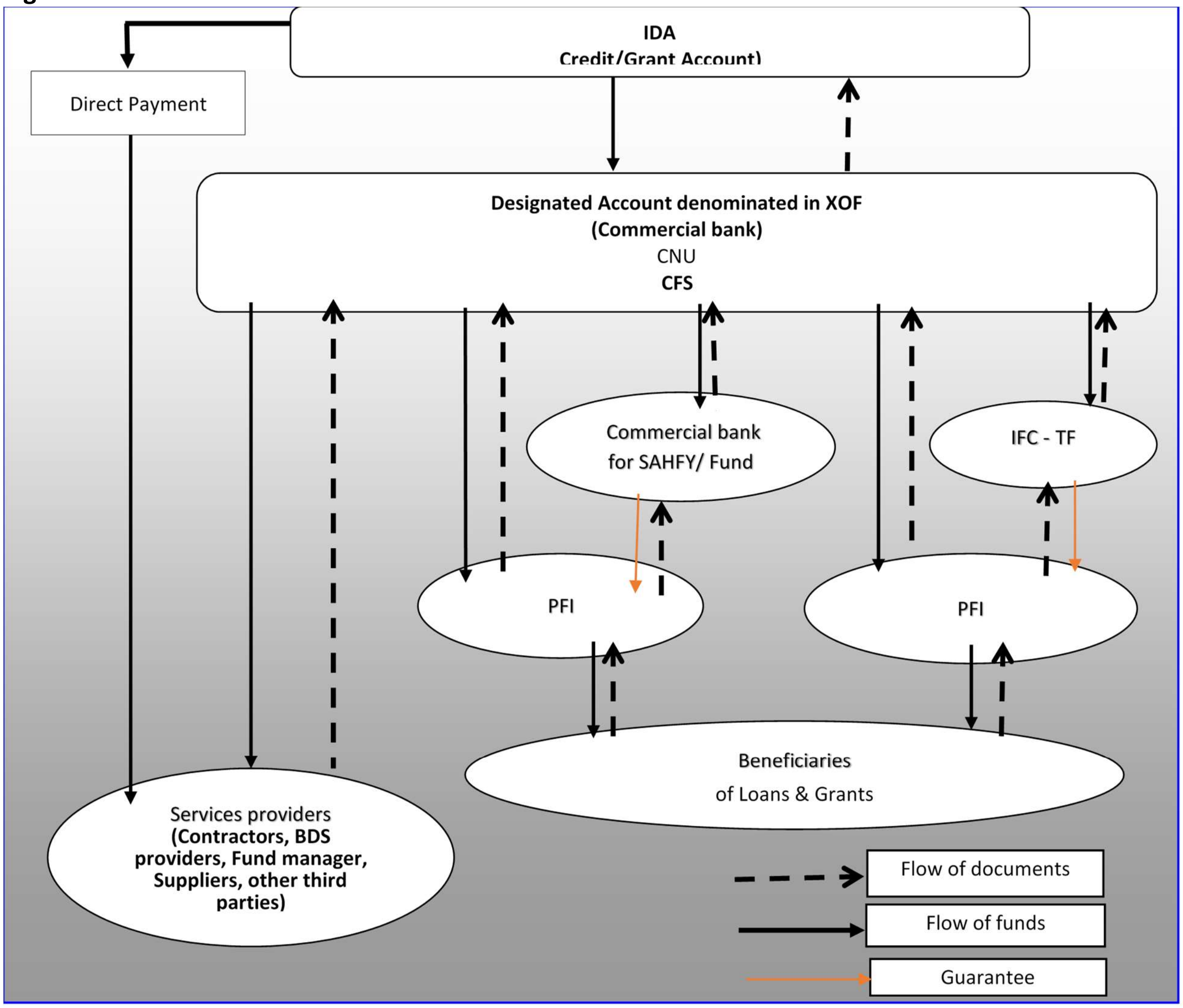
39. **Disbursements arrangements.** The disbursement methods that would be used under this project will be based on the Disbursement Guidelines for Investment Project Financing, dated February 2017. The disbursement methods that are commonly used will be: (a) advances; (b) direct payments to a third party for works, goods and services upon the Recipient's request; (c) special commitments, letters of credit; and (d) reimbursements for expenditures incurred under the project, and so on. Further details about disbursements to the project will be included in the disbursement procedures described in the Disbursement and Financial Information Letter (DFIL) and the administrative, financial, and accounting procedures manual. As the implementing agency of the project, the NCU will maintain the project Designated Account (DA) in an eligible commercial bank. If ineligible expenditures are found to have been made from the DA, the Recipient will be obligated to refund the same. If the DA remains inactive for more than six months, the Recipient may be requested to refund to the World Bank, amounts advanced to the DA. The World Bank will have the right, as reflected in the Financing Agreement, to suspend disbursement of the funds if reporting requirements are not complied with.

40. **Banking arrangements.** The NCU will open one segregated Designated Account (DA) denominated in CFA franc in a commercial bank on terms and conditions acceptable to the World Bank. The project's DA will function under the co-signature of the Project Coordinator and the FM specialist of the project. Each recipient will open an account into which to receive funds from the NCU for making payments for operating costs and subprojects activities, respectively.

41. **Flow of funds arrangements.** Funds flow arrangements (through the DA above) are as follows:

(a) The World Bank will make an initial advance disbursement into the DA for the project being implemented by the NCU in CFA francs upon receiving a withdrawal application from the Recipient. From the project's Designated Account, the NCU will transfer funds to the beneficiaries (see Figure 1.2 below).

Figure 1.2: Flow of funds



(b) Replenishment of funds from the World Bank to the DA will be made upon evidence of satisfactory utilization of the advance, reflected in statements of expenditures (SOEs) and/or on full documentation for payments above SOEs thresholds. Replenishment applications would be required to be submitted regularly on a monthly basis. Further details about disbursements to the project will be included in the disbursement procedures described in the DFIL.

D. Procurement

Institutional Arrangements for Procurement

42. The NCU will be responsible for the project for procurement planning and management. The Project Coordinator will be responsible for decision making during the procurement process.

43. *Filing and record keeping.* As part of the PIM, the Procurement Procedures will set out detailed procedures for maintaining and providing readily available access to project procurement records, in compliance with the Financing Agreement. An archiving room will be available, and the NCU will assign one person responsible for maintaining the records. A logbook of the contracts with a unique numbering system shall be maintained.

44. Signed contracts as in the logbook shall be reflected in the commitment control system of the Recipient's accounting system or books of accounts as commitments whose payments should be updated with reference made to the payment voucher. This will put in place a complete record system whereby the contracts and related payments can be corroborated.

45. *Project Procurement Strategy for Development.* As part of the preparation of the project, the Recipient prepared its Project Procurement Strategy for Development (PPSD), which describes how fit-for-purpose procurement activities will support project operations for the achievement of project development objectives and deliver value for money. The procurement strategy is linked to the project implementation strategy at the country, regional, and international levels, ensuring proper sequencing of the activities. It considers institutional arrangements for procurement; roles and responsibilities; thresholds, procurement methods, and prior review; and the requirements for carrying out procurement. It also includes a detailed assessment and description of the National Coordination Unit of the Community Actions Program (CAP) and Government capacities for carrying out procurement and managing contract implementation, within an acceptable governance structure and accountability framework. Other issues considered include behaviors, trends, and capabilities of the market (that is, market analysis) to inform the procurement plan. Special arrangements like direct contracting, use of state-owned enterprises, third-party monitors, local NGOs, force accounts, use of civil servants, results-based arrangements, need for prequalification, if any, are considered and addressed. The World Bank reviewed the PPSD prepared and found it satisfactory.

46. The recruitment of civil servants as individual consultants or as part of the team of consulting firms will abide by the provisions of paragraph 3.23 (d) of the Procurement Regulations.

47. *Procurement Plan.* The Recipient has prepared a detailed 18-month Procurement Plan. It was agreed between the Government of Niger and the World Bank on April 19, 2019. The Procurement Plan will be updated in agreement with the World Bank Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

48. *Training, Workshops, Study Tours, and Conferences.* Training activities would comprise workshops and training, based on individual needs, as well as group requirements, on-the-job training, and hiring consultants for developing training materials and conducting training. Selection of consultants for training services follows the requirements for selection of consultants above. All training and workshop activities (other than consulting services) would be carried out on the basis of approved Annual Work Plans/Training Plans that would identify the general framework of training activities for the year, including (a) the type of training or workshop; (b) the personnel to be trained; (c) the institutions that would conduct the training and reason for selection of this particular institution; (d) the justification for the training, that is, how it would lead to effective performance and implementation of the Project and or sector; (e) the duration of the proposed training; and (f) the cost estimate of the training. Reports by

the trainees, including completion certificate/diploma upon completion of training, shall be provided to the Project Coordinator, will be kept as parts of the records, and will be shared with the World Bank if required.

49. Detailed training and workshop terms of reference providing the nature of training/workshop, number of trainees/participants, duration, staff days/weeks/months, timing, and estimated cost will be submitted to IDA for review and approval prior to initiating the process. The selection methods will derive from the activity requirement, schedule, and circumstance. After the training, the beneficiaries will be requested to submit a brief report indicating what skill or skills have been acquired and how these skills will contribute to enhancing their performance and attaining the project objective.

50. *Operational Cost.* Operational costs financed by the project would be incremental expenses, incurred by the NCU or its regional representations, the Technical Coordination Committee, the Technical Entities, including their decentralized services, based on the Annual Work Plans and Budgets as approved by the Association, on account of project implementation, management, and monitoring and evaluation, including the reasonable costs for utilities and supplies, bank charges, communications, vehicle operation, maintenance, and insurance, office space rental, building and equipment maintenance, public awareness-related media expenses, travel and supervision, and salaries of contractual and temporary staff, but excluding salaries, fees, honoraria, and bonuses of members of the Recipient's civil service. Such service needs will be procured using the procurement procedures specified in the PIM accepted and approved by the World Bank.

51. *Procurement Manual.* Procurement arrangements, roles and responsibilities, methods, and requirements for carrying out procurement shall be elaborated in detail in the Procurement Manual, which will be a section of the PIM. The PIM shall be prepared by the Recipient and agreed with the World Bank before the effectiveness date.

52. *Procurement methods.* The Recipient will use the procurement methods and market approach in accordance with the Procurement Regulations.

53. Open National Market Approach is a competitive bidding procedure normally used for public procurement in the country of the Recipient and may be used to procure goods, works, or non-consultant services, provided it meets the requirements of paragraphs 5.3 to 5.6 of the Procurement Regulations (see Table 1.4).

Table 1.4: Requirements and Actions for National Open Competitive Procurement

N°	Requirements	Actions
1	The request for bids/request for proposals will require that Bidders/Proposers submitting Bids/Proposals present signed acceptance at the time of bidding to be incorporated in any resulting contracts, confirming application of, and compliance with, the World Bank's Anti-Corruption Guidelines, including without limitation the World Bank's right to sanction and the World Bank's inspection and audit.	Reinforce the related provisions by taking into account the aspects related to the World Bank's Anti-Corruption Guidelines (including without limitation the World Bank's right to sanction and the World Bank's inspection and audit rights). Introducing a template of this acceptance in the bidding documents. A World Bank-approved template will be provided.
2	Contracts with appropriate allocation of responsibilities, risks, and liabilities.	Update and take into account the required new elements (in particular, to strengthen environmental and social performance, health, and safety).
3	Rights for the World Bank to review procurement documents and activities.	The requirement must be included in the bidding documents in order to grant rights to the World Bank to review procurement documentation and activities. The legal agreement may also allow this provision.
4	An effective complaints mechanism.	None.
5	Maintenance of records of the Procurement Process.	The requirement must be included in the bidding documents and in the legal agreement. The NCU must spell

		out the practical modalities and the appropriate documentation to archive in the procurement manual of procedures.

54. The thresholds for specific market approaches and procurement methods and the World Bank's prior review requirements are also provided in table 1.5.

Table 1.5: Thresholds for procurement methods, and prior review

Nº	Expenditure Category	Contract (C) Value Threshold* [eq. US$]	Procurement Method	Contracts Subject to Prior Review /[eq. US$]
1	Works	C ≥ 5,000,000	Open Competition International Market Approach and Direct Contracting	≥ 10,000,000
		200,000 < C < 5,000,000	Open Competition National Market Approach	None
		C ≤ 200,000	Request for Quotation	None
2	Goods, IT, and non-consulting services	C ≥ 500,000	Open Competition International Market Approach and Direct Contracting	≥ 2,000,000
		100,000 < C < 500,000	Open Competition National Market Approach	None
		C ≤ 100,000	Request for Quotation	None
3	National shortlist for selection of consultant firms	C < 100,000	For Consulting Services	None
		C ≤ 200,000	For Engineering and Construction Supervision	None
4	International shortlist for selection of consultant firms	C ≥ 100,000	For Consulting Services	≥ 1,000,000
		C > 200,000	For Engineering and Construction Supervision	≥ 1,000,000
5	Selection of Individual consultants	All values	All Approaches	≥ 300,000
6	Direct contracting	All values		As agreed in the Procurement Plan
7	Training, workshops, study tours	All values	Based on approved Annual Work Plan & Budgets (AWPB)	

Note: *These thresholds are for the purposes of the initial procurement plan for the first 18 months and for the risk as rated substantial. The thresholds will be revised periodically based on reassessment of risks. All contracts not subject to prior review will be post-reviewed.

55. *Procurement Risk Rating.* The project procurement risk prior to the mitigation measures is **Substantial**. The risk can be reduced to a residual rating of **Moderate** upon consideration of successful implementation of the mitigation measures contained in the action plan for strengthening procurement capacity provided in table 1.6.

Table 1.6: Action plan for strengthening procurement capacity

No.	Key Risks	Mitigation actions	By whom	By when
1	Lack of a procurement procedures manual based on "World Bank Procurement Regulations for IPF Borrowers" dated July 2016, revised in November 2017 and August 2018	Develop a PIM of procedures with a section on procurement detailing all applicable procedures, instructions, and guidance for handling procurement, the standard bidding documents, and other standard procurement documents to be used. The PIM will outline the interaction between the project stakeholders responsible for procurement	NCU	Before project effectiveness
2	Heavy workload of the Procurement Specialist for CAP-3	Recruit a Procurement Assistant	NCU	Expected within 3 months after project effectiveness
5	Long delays of the procurement processes, especially in bid evaluation processes	Closely monitor and exercise quality/control of all aspects of the procurement process, including evaluation, selection, and contract award in line with the provisions of the procurement manual.	NCU	Throughout project implementation
4	Lack of a dedicated archiving room with a trained staff for its management	Provide adequate space and equipment for the procurement archive and set up an adequate filing system for project records to ensure easy retrieval of information/data according to World Bank requirements for archiving. Designate or recruit an officer to be responsible for data management.	NCU	Expected within 6 months after the beginning of project implementation

56. *Procurement supervision.* Further to the prior review and implementation support missions carried out by the World Bank, it is recommended that at least two missions be carried out each year, with at least one visit to the field to carry out post-review of procurement actions.

57. *Post-review procurement.* Post-reviews can be done either by World Bank staff or consultants hired by the World Bank. They may also be carried out by third parties such as supreme audit institutions, procurement regulatory authorities, consulting firms, NGOs, and others, according to procedures acceptable to the World Bank to ascertain compliance with procurement procedures as defined in the legal documents. The procurement post-reviews should cover at least 10 percent of contracts across the World Bank portfolio that have not been prior reviewed in a financial year. The sampling is risk based and considers (a) the project procurement risk rating (with the riskier project having a larger sample); and (b) the contract risk rating, to ensure that riskier contracts constitute a higher proportion of the sample. Post-reviews contribute to the overall procurement performance rating of the Project based on the rating of the post-procurement review and provide a basis for updating the project procurement risk and the risk mitigation plan.

58. *Oversight and monitoring arrangements for procurement.* The PIM will define the Project's internal organization and its implementation procedures. It will include, among other things, all relevant procedures for calling for bids, selecting consultants, and awarding contracts. The project monitoring arrangements for procurement will be specified. Detailed procurement documentation (namely, the Project Procurement Strategy for Development) may be referenced as such and retained in the project files. The detailed 18-month Procurement Plan was agreed with the Recipient during negotiations and will be uploaded to the World Bank website.

E. Environmental and Social Safeguards

59. **Environmental and Social Safeguards.** The project in its social and environmental rating is a Category B project, which means the potential negative environmental and social impacts are site-specific, are not irreversible, and can easily be corrected by appropriate mitigation measures. The project is expected to have positive environmental and social impacts through improved animal husbandry, introduction of improved agricultural technologies to increase productivity and promote soil conservation, the creation of employment opportunities and livelihood creation, especially among vulnerable groups -- women and youth. The capacity building programs for women and youth and the access to credit on preferential terms will help create employment and livelihood improvement for this category of vulnerable groups. The potential negative environmental and social risks and impacts could include point and nonpoint pollution of water sources, issues associated with the use of agricultural chemicals, an increased release of GHGs because of increased livestock production, and other social risks. The project's safeguards documents which include the ESMF, PMP, and RPF were prepared and disclosed both in-country (April 1, 2019) and at the Info shop of the World Bank (April 8, 2019) prior to project appraisal.

60. The MAGEL has developed experience in implementing the World Bank's safeguards policies notably through projects such as the Community Action Project 3 (CAP-3), and it is expected that this expertise will be used to guide this project. In addition, the World Bank's safeguards specialists will provide further technical guidance to the NCU through proactive, regular supervision missions and in-field technical capacity strengthening of the Social and Environmental Safeguards Specialists. Other implementing partners, such as the contractors, will have social and environmental clauses in their contracts to ensure conformity with the environment and social standards.

61. **Social (including safeguards)**. The project is expected to be beneficial to agriculture and livestock producers as well as small and medium enterprises, and processor organizations which will all contribute to increased productivity and increased market access, particularly for the selected agri-food value chains. Proposed project activities by public entities in component 1 (land for demonstration) may lead to land acquisition and restriction of access to sources of livelihood that could result in the economic and possibly physical displacement of PAPs. Under Component 2, possible encroachment, contestation of ownership or conflicts over lands may occur in structural works situations like fencing farms, land commonly used for boreholes or other installations, easements and passage corridors that may restrict access of resources. Nevertheless, no resettlement will be allowed under subprojects financed under Component 2 (matching grants scheme). The recipient must, as an eligibility criterion, provide a document in accordance with the regulations in force in Niger (see Rural Code), free of any encroachment or challenge as eligibility criteria. Overall, the Involuntary Resettlement policy (OP/BP 4.12) is triggered as a preventive measure to better manage any issue that may arise in the course of project implementation on the ground. Since footprints of project activities are yet to be known prior to Board approval, the Recipient has prepared a RPF to provide clear guidance on minimizing land acquisition and related physical or economic displacement; compensating PAPs; rehabilitating livelihoods; addressing grievances; and implementing the RPF through location-specific RAPs or ARAPs, following the guidelines set out in the RPF. The resettlement process is meant to be inclusive, to encompass vulnerable social groups and guarantee that they receive equitable treatment. The RPF has been reviewed and disclosed publicly in-country and at the World Bank website. Likewise, once RAPs or ARAPs are prepared, these will be reviewed and cleared by the World Bank and the Government and disclosed publicly in-country and at the World Bank website.

62. The provision of capacity building programs and access to finance for women and youth will assist this category of beneficiaries to derive greater benefits from the project and improve their socio-economic conditions. Similarly, the project provides for greater participation of women and youth in the management committees set up for the management of existing small-scale irrigation perimeters, since they are the main beneficiaries of this type of investment. As regards gender violence (violence against women) and child labor, the project adopts a zero-

tolerance policy and will encourage beneficiaries to adopt a similar no-tolerance approach to these issues.

63. The Recipient has shown a great deal of experience in implementing social and environmental safeguards measures. The Recipient will be required to carry out the screening of planned infrastructure activities in accordance with the requirements of the social safeguards framework (RPF), prepared by the Project. This will help identify the different types of preventive and mitigation measures that may be required for the prevention of conflicts related to land security, access to sources of livelihoods, and social disagreements. Any additional safeguards instruments, such as site-specific RAPs, if necessary,[30] will be prepared based on the RPF, in consultation with beneficiaries. The RPF was publicly disclosed in-country on April 1, 2019, and on the World Bank website on April 8, 2019.

64. **Gender, Gender-Based Violence (GBV), and child labor.** The project will seek to promote greater awareness of gender violence and child labor and in this respect will encourage the communities to commit themselves to a zero tolerance for these practices. The GRM to be set up will be used to receive and register complaints which will be referred to the GR Committee. The report to be submitted on the GRM shall include the cases of gender violence and child labor.

65. **Citizen Engagement.** The project will seek to foster views and decisions in different project interventions through, for example, having the representatives of civil society organizations (CSOs) on the Steering Committee to transmit the concerns of beneficiaries and participate in the decision-making process for implementing project activities; (ii) promotion of IBM; and (iii) operationalizing the GRM to provide multi-level arrangements for registering and addressing grievances and complaints from the beneficiary communities.

66. The project will build on these and other mechanisms through a more structured citizen engagement strategy which will target not only the beneficiary groups but also other stakeholders, such as the private sector and NGOs operating in the project area through direct consultations with beneficiaries, strengthening partnerships, and obtaining their feedback on project implementation.

67. The project will provide periodic reports on the implementation of the citizen engagement activities in close collaboration with the beneficiary communities. Such reports shall include the beneficiaries' feedback on project implementation, the level of beneficiaries' participation in the project, the grievances registered, and whether/how they were addressed. An improved communication strategy will provide timely information and feedback which could be used to improve project performance.

68. **Iterative Beneficiary Monitoring.** The project will seek to promote greater beneficiary participation and involvement in the project and in this respect will explore the possibility of introducing IBM, a feedback mechanism which, on a regular basis, identifies and quantifies distortions and shortcomings that place the achievement of project objectives at risk and reveal what is not working during implementation. Distortions are brought to the attention of project leaders and project managers, by the beneficiaries, who use that information to improve the management of the project. CSOs and beneficiaries will be involved in World Bank supervision missions as well as the joint evaluation of project results upon completion of the project. Recurrent consultations with civil society and direct beneficiaries will be part of the project M&E strategy.

69. **Grievance Redress Mechanism (GRM).** A GRM will be established to enable affected communities and individuals to lodge complaints or concerns, without cost, and with the assurance of a timely and satisfactory resolution of the issue. The mechanism shall build on the local dispute resolution mechanisms in conformity with the RPF, and it will provide multiple channels for soliciting complaints; registering complaints and ensuring a timely acknowledgement, response, and resolution of the complaints in a transparent manner. The GRM will also spell out

[30] Since the project will support business plans by private entities, it is unlikely that any RAF will be needed.

options for mediation and appeal. Through the GRM, affected persons will be provided a clear and accountable means to raise complaints and seek remedies when they believe they have been harmed by project activities. In each beneficiary community, the Project shall explain to the beneficiary communities how the GRM mechanism is expected to work in terms of registering and addressing grievances and complaints and the procedure that will be followed to arrive at decisions.

<u>Appendix 1 of Annex 1:</u> Synergy of PIMELAN with World Bank and other externally-funded projects

WB Projects	Description	Synergy with PIMELAN
PRAPS-Niger (P147674): Regional Sahel Pastoralism Support Project-Niger (Projet Régional d'Appui au Pastoralisme au Sahel pour le Niger)	IDA-funded. Focusing on pastoral (mobile) systems in Niger [while PIMELAN activities will focus on sedentary livestock, crops, and aquaculture]. Part of the regional PRAPS initiative (IDA). Cost: US$ 45 million. Approval: FY 2016. Duration: 6 years. Closing date: December 2021.	PIMELAN and PRAPS-Niger will have operational complementarities touching *inter alia* upon: (i) epidemiologic surveillance and vaccinations; (ii) feed production and supplementation; (iii) access to market information; (iv) livestock sector crisis prevention and management; and (v) shared management setup.
CSA (P153420): Climate-Smart Agriculture Project (*Projet d'Appui à l'Agriculture Sensible aux risques Climatiques, PASEC)* approved in 2017	IDA-funded with US$111 million. The development objective of the Climate-smart Agriculture Support Project for Niger to enhance adaptation to climate risks, to improve agricultural productivity among the Targeted Communities and in the event of an eligible crisis or emergency, to provide immediate and effective response to said eligible crisis or emergency. It is scheduled to close in December 2022.	PIMELAN and CSA complement each other. PIMELAN will focus mainly on profitable business plans in any livestock and agriculture value chain of particular importance for women and youth. Close coordination will be needed at the level of regions and Communes where both projects will be active.
WAAPP (P094084): West Africa Agricultural Productivity Project for Niger	IDA-funded. Support for agriculture technology development. US$ 15 million additional financing of IDA provided, closing in December 2019.	PIMELAN will scale up the results of research and technologies developed under WAAPP. PIMELAN will also support the National Livestock Laboratory (LABOCEL) in areas such as production of Newcastle vaccines.
REDISSE 3 (P154807): West Africa Regional Disease Surveillance Systems Enhancement Program (Phase III)	IDA-funded. The project strengthens national (15 ECOWAS countries) and regional cross-sectoral capacity for collaborative disease surveillance and epidemic preparedness in West Africa. IDA Grant: US$ 7.0 million. IDA Credit: US$ 140.0 million for regional initiative. Cost for Niger project: US$ 45 million.	Shared interest of PIMELAN, PRAPS-Niger and REDISSE regarding One Health issues, particularly for adequate disease surveillance capacity and results.
SIIP (P154482): Sahel Irrigation Initiative Project	IDA-funded. Regional project will support irrigation initiative in six Sahelian countries. Cost: US$198 million (IDA: US$170 million). Implementation: FY 2018-23.	Joint interest between PIMELAN and SIIP-Niger with regard to production of fodder crops in selected irrigated areas of Niger.
The Competitive and Growth Support Project. (P127204)	IDA-funded. It includes the rehabilitation and upgrading of slaughterhouses and their respective environments for developing meat production. US$50 million. It closed on March 31, 2019.	Increased productivity in the livestock sector and support to the SMEs in the livestock sector under the PIMELAN will benefit the development of the slaughterhouse in Maradi.
Rural Development Policy Operation (DPO; P166124)	IDA-funded with US$120 million. It provides financial support for the implementation of the PDES II. Its objectives include "increasing rural productivity growth" and "supporting growth enabling sectors." It further seeks to provide input subsidies and improve agricultural extension in pilot communes	To the extent that the pilot work with e-extension and/or input subsidies was judged to be successful in the 10 targeted Communes, PIMELAN could scale up.

WB Projects	Description	Synergy with PIMELAN
Smart Villages for Rural Growth and Digital Inclusion project (P167543)	Under preparation. IDA funded. The project aims at improving rural productivity and digital finance in rural areas. The Project will support digitalization of payments of inputs and will create a platform which will allow use of alternative methods for credit scoring (based on trails of digital transactions)	The credit scoring to be put in place will be used by financial institutions to assess the credit worthiness of PIMELAN beneficiaries (window 2 and 3)
Projects by Partners		
African Development Bank (ADB)	ADB is supporting a Program to strengthen the resilience against nutritional insecurity and also a project on the mobilization of water in the regions of Tahoua, Maradi, and Zinder	The project management in Niamey and in regions will coordinate.
Agence Française de développement (AFD)	Rural Poles Project in Agadez and Tahoua (EUR 39 million)	The project management in Niamey and in regions will coordinate. The project will coordinate on the guarantee.
Swiss Development Cooperation (SDC)	The SDC is involved in helping livestock breeders and farmers improve production methods, for example, by building water supply infrastructures, establishing transhumance corridors and supplying seed and fertilizer. The SDC also helps producers with marketing.	The project management units of both PIMELAN and Swiss Cooperation in Niamey and in the regions will coordinate.
IFAD	It is supporting a project on the development of the family agriculture in Tahoua, Maradi, Zinder, and Diffa (US$207 million).	The project management units of both PIMELAN and IFAD in Niamey and in the regions will coordinate.
Millennium Challenge Corporation (MCC)	MCC has a “compact” of US$437 million to address access to water for agriculture and livestock, trade barriers, and Government regulation of business	Farmers in the regions/villages targeted by MCC projects will be given priority when possible.
The German Kreditanstalt für Wiederaufbau (KfW)	It is supporting the rehabilitation of public irrigation structures and the update of the agriculture state-owned bank BAGRI.	Project will assess the possibility to work with BAGRI to benefit the private sector
FAO	It is funding an integrated production and pesticide management (IPPM) program that seeks to promote balanced fertilization for healthy crop growth and reduce the use of harmful pesticides.	FAO management in Niamey and in regions will coordinate with PIMELAN.

Annex 2: Detailed Project Description

1. The project, with a total cost of US$134.9 million, is as an IPF to be implemented over a period of six years. It is being funded by an IDA credit in the amount of US$100 million equivalent to the Government of Niger. IFC will provide US$6 million, the beneficiaries will contribute US$5.9 million, and the PFIs will provide US$23 million. The project will have four components: (i) Improving the quality of agriculture support services and policies; (ii) Increasing investment in agricultural production, processing, and market access; (iii) Project coordination; and (iv) Contingent Emergency Response Component.

2. ***Geographic coverage.*** The project will be implemented in six regions: three regions affected by conflict (Diffa, Tillabéri, and Tahoua), and three other regions (Agadez, Niamey, and Zinder) selected by the government. The primary selection criteria for these regions include the prevailing agro-climatic conditions, the unfulfilled productive potential and poverty incidence. While investments are targeted regionally, cross-cutting capacity-building activities at the national level, such as that of veterinary services, and support for policy and regulatory reforms will be national in nature. As far as agricultural extension and veterinary services are concerned, the capacity building activities funded by the project will be accessible to beneficiaries from all regions of the country. In contrast, project-sponsored investments under Component 2 will be limited to participating project regions.

Component 1: Improving the quality of agriculture support services and policies (US$42 million equivalent from IDA)

3. This component's objective is to improve the quality of agriculture support services and policies which are critical to increase the productivity of agriculture for both crop production and sedentary livestock systems, including aquaculture and fisheries, to improve the safety and quality of food products in response to market demand, and to create an enabling environment, more stimulating for investments in the agri-food sector. Given that the impact of climate change is one of the main risks likely to hinder the increase of productivity, increased climate resilience will be sought through the dissemination, incentivization, and financing of climate-smart practices and technologies in all activities. The project would strengthen human, institutional, and policy making capacities for key public and private actors in the sector. Key outcomes would include (i) improved access to, and delivery of, quality extension and advisory services; (ii) improved access to, and delivery of, quality veterinary and phytosanitary services; and (iii) improved policy and regulatory environment conducive to the development of the agri-food sector, particularly at the level of small and medium-scale producers and other private sector stakeholders (including women and youth). Support to advisory services will focus on improving the coordination and management of advisory services and providing capacity to selected advisory and extension actors to deliver effective services within project areas.

Subcomponent 1.1: Strengthening crop and livestock extension services (US$7 million equivalent from IDA)

4. The objective of the subcomponent is to build the capacity of the national extension and advisory service to more effectively play its role in increasing producers' knowledge and capacities. This subcomponent will support the implementation of the strategy for the National System for Extension and Advisory Services in Agriculture *(Système National de Conseil Agricole; SNCA)* endorsed by the Government of Niger on August 2, 2017.[31] The SNCA, composed of private and public providers as well as NGOs, aims at improving food security at the national level, in particular for the most vulnerable, and increasing the contribution of the agricultural sector

[31] The strategy for the National System for Extension and Advisory Services in Agriculture aims, with a light coordination structure, at coordinating and strengthening the existing extension services providers to respond to regionally and sector diversified demands, timely and through innovative approaches, including climate-smart agriculture. The general principles include the optimal complementarity between private and public sector, the progressive Government disengagement and the evolution towards a virtuous sustainable funding system. Open to all value chains actors, the SNCA will specifically target the most vulnerable populations, such as women and youth.

to the country's economy through service provision all along the value chains, while ensuring socially and environmentally sustainable development, including through increased climate resilience. The subcomponent will be implemented by the General Directorates of Agriculture and of Agricultural Engineering *(Directions Générales de l'Agriculture et du Génie Rural)* within MAGEL.

5. Effective advisory services need to design programs tailored to the needs of different producers, considering the segmented nature of the sector composed of: (i) households with only limited surplus production, requiring fairly basic technical advice; (ii) more commercial farmers who are already actively supplying nascent value chains but need assistance for upscaling; and (iii) operators at various levels of the value chain, who require specialized technical advice for production and value addition processes in order to access larger, more sophisticated markets.

6. To do this, the project will rely on differentiated service delivery mechanisms, based on the regional availability of services. The delivery of advisory services would take place through at least three different channels. These will include: (i) the government's advisory services with assistance of NGOs mainly for basic technical support; (ii) private advisory service providers for specialized technical needs; (iii) well qualified international service providers to assist applicants with complex investment proposals under Component 2 requiring high-level multidisciplinary technical knowledge. Where expertise might be present on certain specific crops or animal species within existing producers' organizations, they will be associated with the delivery of, or providers of, advisory services, in particular when such organizations are well established and have demonstrated their ability to provide services to producers. The various actors providing advisory services need to respond particularly to the specific needs of women and youth.

7. With this context in mind, the project will focus on capacity building activities for the APCA[32] that has the mandate to coordinate the SNCA, and for SNCA participants, the advisory service providers, to ensure that the most effective delivery mechanisms are used, and that relevant information is provided to the various types of producers and operators.

8. For APCA, project support will include:

- The development of customized annual extension programs and longer-term advisory programs for different regions and production systems as well as different producer types in line with project priorities;
- The development of a resource plan (budget, human resources, equipment and possibly land for demonstrations) necessary for the delivery of the annual extension programs, differentiating between private goods and public goods and beneficiary cost participation in private goods;
- The design of program delivery mechanisms that ensure that the personnel and capacities of the service providers correspond with the needs of beneficiaries and can reach usually underserved groups such as women and youth; and
- Regular monitoring and evaluation of extension services and programs.

[32] By Decree N ° 2017-664 / PRN of 02 August 2017, a National System of Agricultural Council (SNCA) was created in Niger that allows for the (i) federation of the disparate entities of the Agricultural Council under the control of the State, (ii) strengthening of the new actors of the Agricultural Council, (iii) provision of relevant guidance for the Council to be comprehensive and meet all the needs of value chain actors in all their diversity, and (iv) regionalization and adaptation of interventions to local needs. By Decree No. 2017-667 / PRN / MAG / EL of August 2, 2017, the Promotion Agency of the Agricultural Council (APCA) was created to ensure the implementation of the SNCA and the coordination of the operational work of council.

9. The advisory program will be informed, among others, by the research conducted and technologies developed with support from the West Africa Agricultural Productivity Program (WAAPP). The project will also develop synergies and complementarities with PRAPS-Niger, PASEC, and the SIIP, in areas such as the use of advisory pamphlets and information on the necessity of participating in vaccination programs, application of good animal husbandry practices, effective water management in irrigated plots, effective pest management techniques, good agricultural practices, etc. For the SNCA, project support consists of training to be delivered to the extension and advisory service providers as deemed necessary for project activities. Training program design and delivery will be provided through competitively selected technical assistance (TA). Training of SNCA participants will focus on the delivery of services of a public good nature and involve the following:

- Training to increase transfer of agricultural technologies and practices in line with priorities identified under the programs developed by APCA, developing illustrated information pamphlets for farmers on issues such as the application of basic hygiene practices, recognizing labels of agro-chemicals, adopting basic safety precaution for the use of chemicals, including recognizing labeling of toxic products and basic principles of risk-based approach measures to improve hygiene and food safety;
- Training on crop and livestock value chains customized to reflect the regionality of cropping and production systems across project regions, such as peppers and smoked fish in Diffa;
- Training of irrigation specialists to improve knowledge of micro-irrigation system design and implementation including: (i) socio-economic considerations affecting design, (ii) comparison of cost effectiveness of initial capital investments vs longer-term operational/maintenance and lifecycle costs; (iii) integrating crop economics including variety, intensity and rotation of crops to ensure system cost recovery; and
- Training for extension officers and advisory services on the content and basic steps for the development of a simple business plan from design to implementation and impact assessment in coordination with support provided to banks for business plan evaluation under Component 2.

10. These trainings will focus on the methods of dissemination of innovative technologies (in particular CSA), technical references, and on approaches to improve outreach to under-represented or marginalized groups (people in conflict-affected areas, women and youth) in particular through e-extension services and local rural radio programming. Delivery mechanisms will be regionally adapted along production systems, and they will vary depending on whether a region is a conflict-affected area where Government services have difficulty in reaching producers and where qualified service providers can be subcontracted to deliver services. Special attention will be paid to stimulating demand from slow adopters of innovations and from those who are the least informed about technological innovations and their potential.

11. Some cross-cutting aspects, like climate-smart agriculture or gender aspects, would be integrated in all extension and advisory activities to increase producers' awareness and improve their capacity to mainstream climate adaptation, mitigation, and gender actions.

Subcomponent 1.2: Support to veterinary and phytosanitary services (US$28 million equivalent from IDA)

12. The objective of the subcomponent is to increase the availability of, and access to, specialized high-quality public and private veterinary and phytosanitary services to crop, livestock and fish producers, and other value chain actors, to contribute to crop and animal productivity enhancement, to mitigate increased plant and animal disease risks linked to climate change, and to strengthen food quality and safety. The project will focus on the main crop and livestock sanitary issues and work in synergy and complementarity with other projects, in particular World Bank-financed projects like the WAAPP, PRAPS, and REDISSE for the animal sector and PASEC for the crop

sector. Regarding the support to be provided in the livestock sector, the still-relevant recommendations of the 2008 Performance of Veterinary Services (PVS) evaluation and the 2012 Gap Analysis conducted by the World Animal Health Organisation (OIE) in Niger will be taken into consideration. Because of the need to effectively address epidemiological issues, animal health would be addressed nationwide under the coordination of MAGEL's veterinary services. As the animal diseases surveillance systems are being reinforced in the framework of the REDISSE project, and the national animal vaccine production capacity, located at the Central Veterinary Laboratory (LABOCEL) which has been previously supported by the WAAPP has been strengthened, the project will only provide, if needed, some very specific support to these activities (for example, the adaptation of a disease surveillance network for a specific disease, or the replacement of out-of-order laboratory equipment). As climate change can have a huge impact on crop and livestock pests and pathogens expansion, and may induce emerging, re-emerging or amplified disease outbreaks, the activities under this subcomponent will foster the sector's adaptation to climate change. They will be implemented by the General Directorates of Plant Protection and Veterinary Services *(Directions Générales de la Protection des Végétaux et des Services Vétérinaires)* within MAGEL and the Directorate of Fisheries and Aquaculture *(Direction de la Peche et de l'Aquaculture)* within the Ministry of Environment and Sustainable Development.

13. *Enhanced surveillance systems, including weather-related monitoring, for emerging and re-emerging crop priority diseases.* The project will support the epidemiological networks and make them widely inclusive, with field technicians (at local and border posts), farmer representatives, regional and national public services, plant protection *brigadiers*, and other private practitioners. In this regard, the project will finance training in epidemiology, investigating outbreaks, clinical diagnosis, sample collection and packaging, as well as reporting. Network members will receive support for communication, meetings, reporting, production, and dissemination of information on crop diseases. Where needed, public service agents will receive support for transport and equipment (motorcycles and sampling kits).

14. *Fight against crop diseases and pests.* In addition to the action of already sworn-in inspectors for crop seed certification, crop production enhancement will be supported through the purchase, storage and, when required, the provision of preventive and curative products to fight diseases and pests. As much as possible, biological control will be promoted. These interventions would be closely coordinated with the advisory services that will serve as the first notification level alerting to the need for intervention, while MAGEL's phytosanitary and plant protection services would then coordinate the intervention on the ground through its own services or private providers depending on availability.

15. *Fight against priority productivity-impacting livestock diseases: awareness campaigns, vaccination programs, and antiparasitic products distribution.* Financial support will be given for planning, implementing, and monitoring vaccination and antiparasitic campaigns. Specific attention will be given to the complementarity with PRAPS and other donor-funded initiatives supporting vaccination activities. In particular, for *Peste des Petits Ruminants (PPR)* and Contagious Bovine Pleuropneumonia/*Péri Pneumonie Contagieuse des Bovidés (PPCB),* the activity will be aligned with the recently endorsed national programs for PPR eradication, *Plan National Stratégique d'Eradication de la Peste des Petits Ruminants (PNS-PPR)* and PPCB control, *Plan National Stratégique de Controle de la Péri Pneumonie Contagieuse des Bovidés (PNS-PPCB).* This activity will support vaccination programs for PPR (5-10 million doses of vaccine for small ruminants per year), PPCB (7 to 10 million doses for cattle every year), and Newcastle disease (around 10 million doses for poultry every year).

16. A special effort will be placed on Foot and Mouth Disease (FMD), including support for virus characterization by an international reference laboratory, and the development of a prevention and control strategy. This subcomponent will also finance the initial procurement of 100,000 doses of appropriate vaccine

(based on virus characterization) from a referenced manufacturing company. Following the same objective of animal health improvement, antiparasitic campaigns will be supported.

17. *Promotion of public health and food safety through enhanced quality control of inputs and food products.* Production, and subsequent food and feed shelf life increases, require strengthened and improved controls of feed and food chain inputs and products. Regarding the major consumer risks (microbiological contamination, residues of veterinary medicines and pesticides), Government services (see below) will be trained on inspection methodology, including sampling, and inspection follow-up to ensure consumer protection and improvement of food processing, storage, and transport hygiene. Concerned laboratory units will benefit from training and will be provided with required kits and reagents. The subcomponent will also undertake the following activities:

a. *Veterinary medicine control*: training on inspection at border posts and points of sale in accordance with the regional/national regulation will be organized. 100 samples will be collected and analyzed yearly at the *Laboratoire d'Analyse en Santé Publique et d'Expertise (LANSPEX)*;
b. *Phytosanitary product and fertilizers control*: training on inspection at border posts and points of sale in accordance with regional/national regulation will be organized;
c. *Feed control*: training on inspection at border posts and main points of sale (including for national production) will be organized. In addition to systematic import controls, 100 samples from national production will be collected and analyzed yearly at the *Laboratoire d'Analyse et de Nutrition Animale (LANA)*; and
d. *Food safety control (in complementarity with the Ministry of Commerce and Private Sector Development)*: training on inspection at slaughterhouses, refrigerated warehouses, processing plants, and markets will be organized. 100 poultry meat samples, 100 cattle meat samples, 100 small ruminant meat samples, 100 milk and milk product samples, and 100 samples from imported frozen fish will be collected and analyzed yearly at LABOCEL, half for microbiological contamination and half for residues of veterinary medicines.

18. For sustainability purposes and due to its expected increasing role in animal health protection (diagnostics and vaccine production) and food safety (food analysis), the business plan of the LABOCEL will be updated and consolidated with support from the project.

Subcomponent 1.3: Strengthening the policy, legal, and regulatory framework and developing mechanisms for preventing and responding to severe crises and emergencies in the agriculture sector (US$7 million equivalent from IDA)

19. Agricultural productivity and growth depend, to a large extent, upon the ability to make timely and informed decisions. Agricultural policies must be based on scientific or solid empirical evidence and analysis. To this end, the project will support the transformation and the strengthening of the effectiveness and efficiency of the APSU. There is already in the Studies and Planning Directorate a small unit which will be transformed by Ministerial Order *(Arrêté Ministériel)* into the APSU. The role of this unit is to analyze agricultural sector data and to develop policy recommendations on that basis. On demand, it could also provide analyses and decision support across related ministries such as those in charge of environment, fisheries and aquaculture. Staff will also be trained in better understanding climate change risks, analyzing climate information, and integrating climate resilience and mitigation policies in strategies, programs and projects. The unit will also serve as a data source for other institutions wishing to conduct their own research on agricultural policy. The unit will provide timely policy recommendations in response to short-term challenges in the agriculture sector, carry out in-depth analysis for generating policy options to address medium and long-term challenges, and monitor policy implementation and evaluate policy impacts and relevance. The project will finance training activities, collaboration agreements with

scientific and technical structures involved in agricultural policy analysis, short-term technical assistance, including some specific studies, and digital services and solutions.

20. *Studies to review sector policies*. The project will finance selected studies, and reviews of the effectiveness of existing policies aiming at making proposals for improvements to help the Nigerien Government in maximizing the impact of its investments in the sector. Priority will be given to policies relevant for reaching the project's PDO. For this purpose, for example, input supply policies would be assessed and reform proposals prepared during the first year of project implementation.

21. *Gender policy.* The unit will address five areas considered as key to supporting women's empowerment and enhancing women's agricultural productivity: (i) improving women's access to inputs and extension services to increase on-farm productivity; this includes greater access to veterinary and phytosanitary services, specifically targeted to the needs of their own household animals (poultry, small ruminants, etc.) and garden produce (horticultural produce); (ii) increasing women's food processing productivity through greater access to energy, labor saving technology, and clean water; (iii) increasing rural women's involvement in formal financial transactions and the availability of credit to rural women producers; (iv) stimulating the demand for women's products by improving their access to markets; and (v) providing readily available preventive child and maternal health services to free up women's labor from household chores to productive activities. The project would support as a priority the policy spheres under (i), (ii), and (iii) above, bearing in mind that the other two policy spheres under (iv) and (v) are expected to be covered by other projects.

22. *Crisis prevention and management*. To support MAGEL's capacity to prevent and/or respond to crises, the project will provide equipment, training, and finance specialized studies and communication campaigns; and it will consolidate and operationalize the crisis prevention and management tools of MAGEL, including the organization of inter-sectoral fora for crisis management at local and national levels (as well as the participation of key MAGEL staff in international crisis management forums in West Africa and the Sahel). In doing so, the project would contribute to strengthening the existing National Mechanism for the Prevention and Management of Disasters and Food Crises *(Dispositif National de Prévention et de Gestion des Crises Alimentaires - DNPGCA).*

Component 2: Increasing investments in agricultural production, processing, and market access (US$45 million equivalent from IDA and US$7 million from IFC)

23. The objective of this component is to improve productivity and market access for targeted beneficiaries in the agri-food sector, with the ultimate objective of increasing their economic opportunities, through improved linkages between producers and buyers and increased access to finance. To this end, the project will support (i) the creation of productive partnerships (Subcomponent 2.1), (ii) access to finance for targeted beneficiaries in the agri-food sector, including at the level of production, processing, storage, transportation, and marketing of agricultural and livestock products for domestic and export markets (Subcomponent 2.2); and (iii) TA and risk sharing instruments to Participating Financial Institutions (PFIs) to improve the supply of agriculture credit (Subcomponent 2.3).

24. The principles of intervention under this component will be: (i) leveraging synergy with other World Bank and IFC projects to improve the effectiveness of PIMELAN activities; (ii) focus on agricultural and livestock products that offer the best economic opportunities for marketing and processing at the national and international levels; and (iii) giving priority to actors, especially producers and processors, who are linked to farmers' and processors' associations. Component 2 interventions will be grouped into three Subcomponents.

25. Subcomponent 2.1 will be implemented by MAGEL, in collaboration with the Ministry of Finance, and with the support of the National Selection Committee and service providers to be recruited by the project. These

service providers will include firms specialized in the agri-food industry, business development services, as well as incubators at the national, regional or international level to be selected through a competitive bidding process. Subcomponent 2.2 will be implemented by PFIs to be selected following the World Bank Policy and Procedure for IPF operations. Subcomponent 2.3 will be implemented by the IFC and a private management firm specialized in partial credit guarantees, and service providers to be recruited by the project.

Subcomponent 2.1: Developing Productive Partnerships (US$6 million equivalent from IDA)

26. The objective of this subcomponent is to improve market access for groups of producers and SMEs in agri-food value chains with demonstrated economic prospects. To do so, the project will support two activities : the first activity consists in hiring specialized firms (various service providers and business development services providers who which will be recruited based on demand) which will support a productive partnership program through the following activities: (i) the identification of off-takers at the national, regional and potentially international level for agriculture, livestock, and fish products with demonstrated economic prospects; (ii) helping groups of producers and SMEs enter into commercial agreements with those off-takers; (iii) building the capacity of the groups of producers and SMEs to respond to the demand of these off-takers including by improving the quality of their products; and (iv) developing sustainable business models and business plans that could allow sustainable growth of the SMEs, and groups of producers involved in those productive partnerships (for commercial farming, processing and commercialization). The second set of activities include the financing of (i) communication campaigns; (ii) financial literacy programs; and (iii) training of trainers in financial management/literacy in the participating regions. This will be done through specialized firms with proven expertise in these different areas.

27. A call for proposals will be launched by MAGEL for producer groups and agri-food SMEs to formulate requests for support in establishing a productive partnership. Priority will be given to cooperatives and groupings. Among those, priority will be given to women and youth. A National Selection Committee (NSC) to be chaired by MAGEL, including a representative of the NCU, a representative of FISAN, a representative of each of the PFIs, a representative of the agriculture network *Reseau des Chambres Agricoles,* a representative of the Ministry of Finance, and a representative of the Chamber of Commerce will evaluate the expressions of interest, and the successful applicants will receive support from services providers and business development services (BDS) companies recruited by the project as mentioned above for the establishment of productive partnerships. The NSC will select beneficiaries through a competitive process, based on the applications that they will submit.

28. BDS companies will work with recipients to develop their business plans, and identify concrete market opportunities, leveraging studies on the competitiveness of Niger's agricultural products, including the World Bank's 2014 Niger Export Diversification Study and the World Bank’s Agribusiness Assessment, and carrying out further studies as needed. BDS companies will then work to connect recipients with buyers and facilitate exchanges among buyers to determine buyers' expectations, including product specification, quality, volume, frequency of delivery, and price requirements, as well as the means to be implemented by the beneficiaries to meet the expectations expressed by the buyers. BDS companies will help formalize commercial agreements such as purchase agreements. If necessary, they will also be able to organize sector-wide trainings. Other service providers (in agriculture and agri-food business management) will provide support to the beneficiaries during implementation of the productive partnerships.

Subcomponent 2.2: Increasing Access to Finance (US$28 million equivalent from IDA)

29. This subcomponent will support producers, producer groups, and SMEs in the agri-food sector, who participated in the productive partnerships program, and those who have pre-identified clients or markets, to access finance for viable investments (including for their initial working capital). To this end, the subcomponent

will provide grants to beneficiaries under a cost-sharing financing (CSF) program. Further details on the cost sharing program will be provided in the Grants Manual (GM) prior to effectiveness. The selected PFIs will enter into a legal “Participation Agreement” with the MAGEL.

30. Eligible beneficiaries include producers, producer groups, cooperatives and SMEs in the agri-food sector who will have pre-identified off-takers or markets and who will present solid business plans backed by business models ensuring commercial and financial viability of their activities. Under the CSF program, window 1 will provide financing in three conflict affected regions: Diffa, Tahoua, and Tillabéri. Eligible beneficiaries will include producer groups, SMEs already operating or interested in farming and activities leading to value addition, and groups with women and youth involved in small scale food production and value addition whose members do not currently have a formal account at a bank or a microfinance institution or who do not qualify for a loan from a formal financial institution due to lack of collateral, low level of income, or other reasons stipulated by a bank or a microfinance institution. Under window 2, beneficiaries will include producer groups and SMEs in all six regions participating in the project.

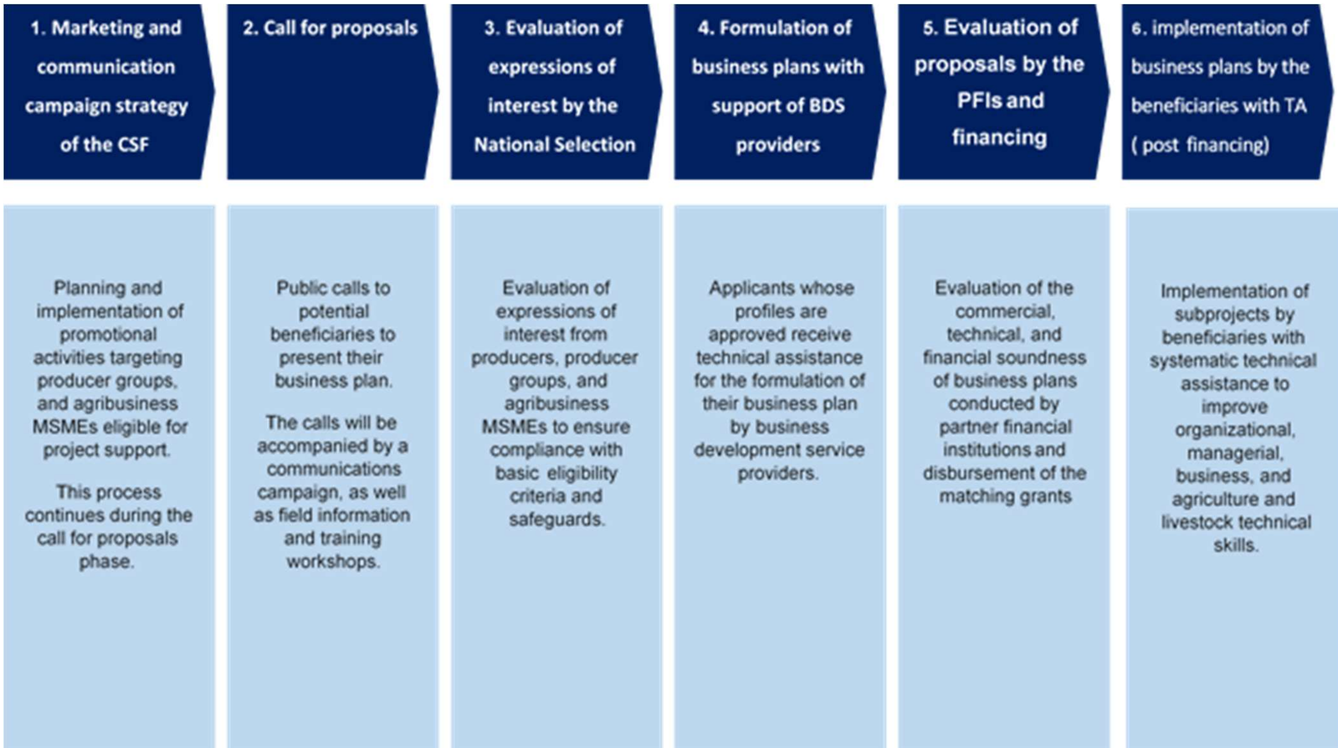
31. Producer group eligibility criteria under window 2. At least 80 percent of participating members of each producer/processor group must be small and must manage their own production/processing units or joint production units. Producers with larger farms/processing may participate and may be eligible but will be considered as individual SMEs, and would need to be registered as such. At the level of the producer group, the following criteria apply: (a) have a bank account in the name of the producer group at a financial institution (b) have a one-year track-record operating as a producer group (even if informally); and (c) possess common assets. People who cannot be eligible for support under the project include: civil servants, politically exposed people[33] and related parties, employees of the Project Implementation units, and their relatives.

32. Business plans should provide for the financing of a set of investments (depending on market needs, supply chain, and related constraints), for example in the following areas: (a) improved access to quality production factors (for example, seeds, cuttings, chicks, fertilizers, animal feeds, rehabilitation and renovation of existing irrigation by with small pumps and hoses, etc.); (b) infrastructure and/or equipment for processing; and (c) infrastructure and/or equipment to improve storage and transport to reach target markets. Investments will be systematically accompanied by technical assistance to install and maintain them and to improve the beneficiary's marketing skills and the management of his/her activities and finances by service providers (under the subcomponent 2.1).

33. Each application for investment will be scored and will need to receive passing grades for each of the following three criteria to ensure the soundness and sustainability of the proposed investment: (a) commercial viability of the business case; (b) technical feasibility of proposed investments; and (c) financial and economic feasibility of the investment. In case the demand for matching grants exceeds the supply of funds, additional criteria could be used to further prioritize the business plans that receive support, such as (a) number of beneficiaries; and (b) contribution to improved nutrition outcomes. Additional points and/or additional support will be awarded to producer groups incorporating women and/or youth in leadership positions and to compete on equal terms. All beneficiaries will receive technical assistance support throughout the subproject cycle. To ensure complete transparency of the process to access support for the productive partnerships, several tools will be established, such as public disclosure of all applicants, disclosure of reasons for rejection to applicants, and public disclosure of beneficiaries (including the type of support, the amount of the investment, and the percentage matched).

[33] A politically exposed person is an individual who is or has been entrusted with a prominent public function.

Figure 2.1: Cycle of the cost-sharing financing program



34. **Types of grants**. Two types of grants will be provided to facilitate access to finance for producer group investments, as well as to catalyze the emergence of strong SMEs. The two types of grants will be managed by the selected PFIs:

(a) **Window #1** (US$6 million): To address the limited access to finance in the agri-food sector in conflict-affected regions such as Diffa, Tahoua, and Tillabéri, the project will provide matching grants for subprojects including working capital and small investments in productive agricultural assets. The following could be eligible under this window: producer groups, youth and women groups, and SMEs already operating or interested in farming and activities related to value addition for agri-food products. Grants under this window will range from US$500 to US$3,000. Grants will cover up to 80 percent of the costs of the subproject, while the beneficiaries will have to provide a minimum of 20 percent in cash or in-kind. Women and youth -led SMEs and producer groups, will be required to provide only 10 percent cash or in-kind contributions and will receive grants covering up to 90 percent of the costs of the project. All beneficiaries will be required to open formal accounts in a financial institution (microfinance, bank, or mobile account). PFIs in charge of grants under this window will receive management fees to ensure the quality of their services. Beneficiaries will also receive support for financial literacy to improve their financial capabilities as well as technical support for the implementation of their business plan; and

(b) **Window #2** (US$22 million): To address the limited access to finance for producer groups and SMEs in the regions of Diffa, Tahoua, Tillabéri, Niamey, Zinder, and Agadez, the project's CSF program will provide matching grants backed by loans from PFIs. Under this window, the CSF program, in accordance with the FISAN principles, is a cost-sharing program between beneficiaries, donors, and financial institutions. The project will provide grants for up to 40 percent of the costs of each subproject, while the beneficiaries will have to prove that they have obtained loans from a PFI for up to 50 percent of the subproject costs. The remaining 10 percent of the subproject funding will be provided by the beneficiaries in the form of cash contributions. Eligible subprojects under this window include working capital and investments, such as equipment, storage, small infrastructure for production, post harvesting and processing activities, and any other activities related to the agri-food sector. The CSF will be accessible to producer groups, processors groups, and SMEs (including startups) who would have received support under the productive partnership program, or who have a pre-identified off-taker. Grants under window 2 may range from US$4,000 to US$100,000. In the specific case of women and youth, beneficiaries will receive grants up to 50 percent of the subproject costs while they will have to prove that they have obtained loans from a PFI for up to 40 percent of the subproject costs. In-kind contributions would be accepted for women- or youth-led SMEs and women or youth groups for projects with total costs less than US$20,000.

Subcomponent 2.3: Providing support to financial institutions (US$11 million equivalent from IDA with IFC participation of US$6 million)

35. The objective of this Subcomponent is to facilitate access by producers and SMEs in the agri-food sector to financial services for investment in productive assets and working capital through a risk-sharing mechanism, and to improve the capacity of financial institutions to serve agricultural producers and SMEs with appropriate financial products. The proposed activities will be complemented by other World Bank projects aimed at strengthening the capacity of the financial sector and correcting market imperfections/distortions and the Smart Villages Project. The subcomponent is divided into two parts and will benefit from the participation of the International Finance Corporation (IFC):

(a) **Risk-Sharing Mechanism** (US$6 million from IDA). A risk-sharing facility (RSF) will be put in place to incentivize financial institutions to lend to farmers and SMEs in the agri-food sector by partially mitigating the risk of PFIs. The sizing of the proposed risk sharing mechanism is based on the credit requirements of Subcomponents 2.2. Following the request of the Nigerien authorities to divide the risk sharing facility in form of Partial Credit Guarantee (PCG) in two parts, the PCG fund will be managed by two independent fund administrators:

i. **An IDA allocation of US$3 million will be used as a "first loss" to enable the IFC to set up a Risk Sharing Facility of up to US$9 million, therefore up to three times the amount of the IDA allocation.** This risk sharing facility will function as a partial portfolio guarantee for PFIs (commercial banks) loans in the agricultural sector (i.e. 50 percent coverage of the credit risks borne by PFIs). The main advantages of using the IFC Risk sharing facility include (i) the multiplier effect brought by IFC participation, which will allow financial institutions to extend credit for up to US$18 million, (ii) IFC has a strong record in designing and implementing RSF including in Niger (iii) because IFC is a highly rated (AAA) credit enhancer, the IFC offers a capital optimization instrument to the participating PFIs in a context of more stringent capital requirements introduced under Basel 2 and 3. The IFC RSF covers 50 percent of the principal of defaulted eligible loans. Under the IFC RSF, eligibility criteria are negotiated and agreed by IFC and the PFI at inception, and all eligible loans are added to the portfolio during a ramp-up period, typically three years from signing the Risk Sharing Agreement. After the ramp up period, no new loans may be added, but IFC will continue to share losses with the PFI until the portfolio is completely amortized; and

ii. **A local Risk Sharing Facility (LRSF) will be established by the project. This LRSF will be managed by an independent firm (Fund Manager) but located at SAHFI, a guarantee company**. The US$3 million will serve for the establishment and operationalization of a PCG to improve access to finance for the agriculture sector from the public bank and microfinance institutions that will not be covered by IFC and will allow to cover assets even after the initial three-year period (that IFC cannot cover)**.** The US$3 million IDA allocation will serve for the capitalization of the PCG fund that could serve public banks and microfinance institutions. The Fund Manager will be selected through an international competitive bidding process. The Fund Manager will have a performance-based contract that will balance outreach and sustainability. The NCU will be responsible for the oversight of the Fund Manager. The Fund Manager will have the fiduciary responsibility of the guarantees financed by the PCG fund as a delegated management contractor and the NCU will manage the balance of project funds and be responsible for overall financial reporting. This fund manager will work with SAHFI pursuant to a legal agreement between the MAGEL, SAHFI and the LRSF Manager (the "Local Risk-Sharing Facility Establishment Agreement"). One million US Dollars will serve to cover the costs of the LRSF manager and technical assistance related to the risk sharing facility. The Fund Manager will develop actions to evaluate and measure the risk of guaranteed credits, exercise control on all operations arising from the administration of the PCG fund, ensure compliance with the regulations governing the PCG fund, study and propose regulatory and administrative changes that help optimize the use of the PCG fund, develop commercial dissemination functions, and train financial institutions and others to increase take up of the fund. It will provide operational and commercial advice to PFIs in their use of guarantees for loans to SMEs.

Figure 2.2 Time line WB-IFC

After WB board approval	Year 1	Year 2
❑ IFC Concept review in October 2019 ❑ IFC Board approval Dec 2019	❑ Recrutment of BDS providers ❑ Productive Partnership program launched ❑ Recrutment of guarantee fund manager for SAHFI ❑ Recrutment of TA providers for the PFIs. ❑ TA to the Financial Institutions (to continue during the whole project implemntation)	❑ Disbursemnt of grants (window 1 and 2) by PFIs ❑ Lending under window 2 by PFIs ❑ IFC RSF launched ❑ SAHFI RSF launched

PFIs to benefit from the partial portfolio guarantees will be selected following World Bank Policy and Procedure for IPF operations and **following financial stability and performance criteria.** To be eligible, PFIs must maintain adequate prudential ratios relating to capital adequacy, asset quality, and liquidity. Only PFIs licensed and supervised by the Regional Central bank (BCEAO) will be eligible to participate. The selected PFIs should have and use internal environmental and social safeguards systems that comply with the national and World Bank environment and social policies. Two PFIs have already been selected, and others to be selected by the project will be subject to 'no-objection' by the World Bank.

(b) **Technical assistance** to participating financial institutions[34] and FISAN to address the limited capacity of financial institutions for agricultural credit (US$4 million). Technical assistance will include: (a) Support to FISAN to improve its capacities for the monitoring and evaluation of agriculture finance, to build its capacities for supervision and regulation of warehouse receipt finance (which allows producers to access credit using their production as collateral), to finance an electronic warehouse receipt finance system which could be connected to the financial institutions, and (b) technical assistance to PFIs. This will include (i) the establishment of agricultural finance units within PFIs; (ii) support for the establishment of a network of agents in the target areas of the project; (iii) capacity building for the development of more suitable financial products, including financing of leasing and storage receipts, mobile farm financing, and other products; (iv) improving risk capacities and development of credit assessment techniques based on financial and non-financial information provided by the database to be created as part of the World Bank Smart Villages project;[35] (v) farm credit risk management; and (vi) support to better understand the principles of environmental safeguarding. The costs of technical assistance for capacity building could be shared between the project and the PFIs. The project will support FISAN's capabilities for the warehouse receipt system and the monitoring and coordination of the implementation of the recommendations of agricultural finance policies.

36. Synergy and complementarity of Components 1 and 2 at a regional level are described in Box 2.

Component 3: Project coordination (US$13 million equivalent from IDA)

37. The objective of this component is to support the MAGEL in effectively managing the project. Accordingly, the component would support all NCU activities required to manage IDA funds, procure IDA-funded goods, works and services, conduct project M&E including Iterative Beneficiary Monitoring (IBM), and comply with safeguard policies. It will also implement a communication strategy, including communication campaigns that work closely with women associations and which may involve religious and traditional authorities. It will provide the necessary training and equipment support to the Ministries of Agriculture and Livestock, the RCUs, the Ministry of Environment and Sustainable Development, the Ministry of Commerce and Private Sector Development, the Ministry of Planning, and the High Commissioner's 3N initiative at central and regional level to carry out technical monitoring of the implementation and monitoring and evaluation for the aspects that concern them in the context of the project. The monitoring and reporting system will capture information and track changes on women and youth’s access to assets and services.

[34] The level of non-performing loans of the largest microfinance institution is estimated at more than 55 percent due to fraud, and bad credit allocation, unfavorable agriculture conditions and declining trade. Its low level of capitalization as well as its liquidity issues put the institution at the verge of resolution. While the ASUSU case is the one getting the most attention, there are other important sources of concerns. NPL ratios for the whole sector, outside ASUSU, rose to 19 percent in 2017 (from 10 percent in 2016), reflecting the limited capacities to assess credit and risks, closing of many small businesses and slowing down of economic activities in fragile zones of the country. Data collected on the sector have proved to not always be reliable reflecting the weaknesses of the information systems of most of the microfinance institutions. Decreasing access to refinancing even for relatively solid microfinance institutions and low capitalization are also serious concerns. It is important to highlight that the consolidation of the sector will require stronger political will and Government financial contribution which is currently lacking. The Government financial support, going forward will be crucial as the experience of the last six years shows that the arrangements which have led to the resolution of more than 30 microfinance institutions without compensating the depositors, are not only detrimental to the microfinance clients, but also affect the trust in the whole microfinance sector.

[35] The "Smart Villages" project aims to improve digital inclusion in rural areas, especially for producers by facilitating their access to mobile payments, by allowing credit rating of farmers on the basis of financial transactions via mobile.

Box 2: PIMELAN organization and intervention modalities at a regional level and how Components 1 and 2 are working together.

The Regional Coordination Units of PAC will be restructured into a project “antenna” which will be established in each of the six target regions to coordinate project activities at a regional level and liaise with all stakeholders involved in project implementation. Each antenna will be composed of a regional coordinator, a private sector specialist, a monitoring and evaluation officer, an accountant, and support staff (driver, cleaning agents, and guards).

The regional antenna will respond directly to the national Project Coordination Unit located in Niamey. Regarding Component 1, the antenna will organize all advisory support activities regarding crops and livestock-funded activities by PIMELAN at the regional level. It will work closely with the regional directorate of MAGEL for the implementation of the national agriculture advisory system (SNCA), as well as all services providers involved in the project agriculture and livestock advisory activities (NGOs and private consultants established regionally).
Regarding Component 2, the regional committee will screen the beneficiaries that could enter the productive partnership under the Subcomponent 2.1. The pre-screened beneficiaries will be then sent to the National selection committee for selection.

Component 4: Contingent Emergency Response Component (CERC) – US$0 million from IDA

38. The CERC will be established and managed in accordance with the provisions of World Bank OP/BP 10.00 (Financing of Investment Projects), paragraphs 11, 12, and 13. The Project’s CERC will be triggered only when the Government has officially declared an emergency and a statement of the facts is provided justifying the request to activate the use of emergency funding. If the World Bank agrees with the determination of the disaster and associated response needs, this component allows the Government to request the World Bank to recategorize and reallocate financing from other project components to cover emergency response and recovery costs. Disbursements would be made against a list of critical goods or procurement of works and consultant services required to support immediate response and recovery needs. A specific Emergency Response Operations Manual will apply to this CERC component that will include detailed operational guidelines for implementation and its approval by the World Bank will be a disbursement condition. All expenditures under the CERC will be appraised and reviewed to determine if they are acceptable to the World Bank before any disbursement is made. Disbursements will be made against an approved list of goods, works, and services required to support crisis mitigation, response, recovery, and reconstruction.

39. **Support to women.** The Government of Niger (GoN) has a record of supporting the advancement of women. Niger ratified the Convention for the Elimination of All forms of Discrimination Against Women in 1999 and the Optional Protocol on Violence Against Women in 2004 as well as other important international agreements on gender equality. However, it has yet to align a number of local laws with the international agreements to which Niger is a signatory. The CPF and SCD have identified several areas in which women are disadvantaged. Those include: lack of access to medical services; lack of adoption of birth control methods and early marriages, resulting in higher and early parenting responsibilities and limited time to generate revenues; high levels of fertility resulting in rapid population growth; limited social protection; and exposure to gender violence owing to regional conflict and resultant population displacement. Human capital, measured in terms of

literacy in French, is low. Economically, various reports cite the lower productivity of women producers' plots; lack of access to male farm labor; low access to and use of productive inputs; and low rates of land ownership.

40. Key reports state[36] that the women of Niger are victims of low human capital development. This is true in terms of formal education and training in non-farming skills. However, it is important to note those traditional skills that women farmers possess that will improve their capacity to attain the project's development objectives sustainably. Although women have low levels of literacy in formal education, many have attended koranic schools and are literate in Arabic script. Moreover, all women who work in the informal sector are numerate. Furthermore, many women producers are experts in domestic animal husbandry, garden farming, processing various types of agricultural produce, smoking fish, producing milk products, and so forth. These are skills that they have applied to their commercial activities to sustain their families over time.

41. Fewer women are engaging in agricultural production: women of reproductive age's focus of productive activities has changed dramatically in less than a decade. FAO has noted that women's contribution to agricultural production in Niger has dropped from 40 percent in 2006 to 11 percent in 2012, and the trend is continuing.[37] This is partly due to high population density and women's lack of access to land as well as increasing religious restrictions. Women of reproductive age are often being kept out of public roles. Most women who work in the fields are either widows or divorcees. Married women raising children remain at home, transform agricultural produce into edible items to be sold by others (men or older women) in the market, and raise small, sedentary livestock. Thus, there are two categories of women producers active in the rural economy. A majority of married women are confined to the home and run their small-scale businesses from home. Older women and widows have more mobility and can work in the fields as well as sell products in the market. A major challenge for younger rural women is their allocation of duties in the household reproductive sphere (fetching water, obtaining fuel, caring for infants, etc.). These activities consume most of their time, and this reduces the time they can devote to the productive sphere of income-generating activities. The second major challenge is their lack of mobility owing to their obligation to stay within the household. Although they rely on other family members to market their goods, they are still at a disadvantage. The third challenge is that they are rarely recognized as producers in their own right by community development structures.

42. Notwithstanding the above, all women have a crucial role in ensuring household food security and contributing to agriculture development in rural Niger. Men produce staples such as millet, sorghum, and corn, while women grow a variety of complementary products such as cowpeas, peanuts, beans, okra, tiger nuts, and sesame, among other items. Women raise (and own) small livestock (such as poultry, sheep, and goats) and process fish for sale, whereas men tend to focus on cattle. Men produce most of the food crops and 91 percent of horticultural products such as lettuce, cabbage, onions, sweet peppers, sweet potatoes, and potatoes.

43. Recent studies[38] show that women participate mostly in value chain activities including small livestock husbandry, poultry raising, milk production and selling fish and rice produced among other post-harvest economic activities. Most food produced locally is used for subsistence. In the absence of food self-sufficiency, men migrate to earn salaries to supplement the household budget. Women dominate value chain food processing in the informal sector, where they pursue a variety of activities aimed at generating income to meet family needs.

[36] Including the Country Partnership Framework, March 2018 and the Systematic County Diagnostic, November 2017.
[37] FAO et Commission de la CEDEAO, 2018, Profil National Genre des Secteurs de l'Agriculture et du Développement Rural, Niger. Série des Evaluations Genre des Pays, Niamey. Kari Bergstrom Hequinet and "The Rise of Wife Seclusion in Rural South-Central Niger", Ethnology, Vol46-No1, Winter 2007
[38] FAO, 2018, Op. Cited.

44. Lack of adequate financing, at all levels, is a major deterrent to women's participation in rural economic development. FINDEX estimates at 15.5 percent of Nigeriens have formal accounts in 2017. Only 10.9 percent of women have formal accounts compared to 19.9 percent of male. In terms of meeting demand for credit, the gap was pretty small. While 2.8 percent of men had borrowed from a formal financial institution, about 2.7 percent of women had also borrowed.

45. The main gender gaps that the project will address include: (i) increased access to productive assets and inputs; (ii) training, improvement in technical and business management skills to equip women to take advantage of profitable economic opportunities; (iii) improved access to technical information and marketing networks; (iv) greater participation in cooperatives and professional organizations; and (v) greater access to financial instruments to advance their business. The project will seek to mainstream support to the above activities geared toward women as an integral part of its support to profitable activities in value chains, and it will grant women funding for their investments.

46. Implementation strategies will be streamlined to optimize women's capacity to benefit from project-related opportunities. The timing and types of project activities and training will be coordinated with their time resources and operational skills. Interventions will not be a one size fits all model. In rural areas, women's capacity to participate in the productive sphere of economic activities depends on the weight of their contribution to the household reproductive sphere.

47. Field intervention strategies will be streamlined to take into consideration the different loci of productive activities as well as younger women's time constraints, older women's lack of Latin alphabet literacy, and their obstacles to obtaining support from financial institutions.

48. **Support to youth**. The plight of youth will be addressed from a gendered perspective. Although both boys and girls suffer from specific disadvantages due to their age and status in rural society, the areas of their opportunities and disadvantages are gender-differentiated. A sizable fraction of Niger's large youth population is either unemployed or underemployed. Therefore, under the project, young people will also receive preferential access to project resources, including investment funding. A study of the roles of women and youth in the household and commercial agriculture economy was prepared as part of project preparation to deepen the understanding of these issues and more clearly define how the project can support these groups. In conflict-affected areas, special attention will have to be placed on unemployed male youth, who are most vulnerable to recruitment in well-funded extremist organizations. In fact, in these areas, the gender targets should be adjusted to include more unemployed or underemployed male youth.

49. **Support to nutrition**. Through its support of small-scale irrigation and sedentary livestock development, PIMELAN will help to promote sound nutritional practices among rural beneficiaries, particularly women and children. Small-scale irrigation is expected to increase availability of fruits, vegetables and other crops, and reducing losses and increasing outputs in the sedentary livestock and aquaculture sectors is expected to increase the availability of animal protein. These are important to a balanced human diet, including during pregnancy and lactating periods as well as the early years of life. Increasing the share of these foods in the calories consumed by the poor in Niger (as in many other low-income countries, particularly in the Sahelian region) can yield nutritional benefits and contribute to reducing malnutrition.

50. **Climate-smart development**. Climate change adaptation and enhanced resilience in the agricultural sector remain priorities for Niger, as emphasized when the Government launched its process for the formulation and implementation of a National Adaptation Plan (NAP) along with a NAP roadmap in late 2014 with a timeline over a three to five-year period. Niger's Nationally Determined Contributions (NDCs) reports that the Agriculture, Forestry and Other Land Use (AFOLU) sector accounts for 89 percent of the total GHG emissions and highlights

agriculture and livestock adaptation as the main priority for the country. Niger's agriculture sector (including livestock and aquaculture) is subject to climate change threats of various kinds: (i) gradual depletion of water sources and water points; (ii) infestation of crops and animals by the vectors of diseases; (iii) degradation of fodder resources; and (iv) natural disasters such as floods and droughts, which are more likely in the North. The project will help to address such threats through adaptation measures. With regard to concerns that livestock production systems are a source of GHG emissions and pollutants, evidence suggests that the more intensive production systems promoted under PIMELAN will have less GHG impact per unit produced than traditional systems (Annex 5). Intensification could, however, result in greater soil and water pollution. The project will promote good manure and waste management practices to prevent such potential adverse effects. Building environmental resilience is a core dimension of PRAPS-Niger that PIMELAN will emulate and extend to other value chains for crop, animal, and fish products.

Annex 3: Implementation Support Plan

A. Strategy and Approach for Implementation Support

1. The key elements of the implementation support strategy include the following:

(a) **Timely support.** The World Bank implementation support will begin immediately after project approval to help the client achieve effectiveness on time. The existing NCU for CAP-3 in MAGEL will be responsible for overall project management but some additional staff will be contracted to ensure that it has the right mix of skills to implement PIMELAN. Given the complexity of the project, at least three missions per year would be undertaken for the first two years. The first Implementation Support Mission (ISM) would be undertaken at the latest three months after effectiveness of the project. Provisions would be made to provide close monitoring especially during the first year of implementation and whenever implementation challenges require a quick response.

(b) **Continuously strengthening capacities.** When needed, capacity building will be provided to the technical team. In addition, trainings will be provided by the task team on World Bank operations, fiduciary, and safeguard aspects of the project to staff in the NCU. Moreover, on top of carrying out their usual implementation support functions, World Bank fiduciary, safeguard, and M&E specialists will be available to provide close support and detailed hands-on guidance to their counterparts during the initial months following effectiveness.

(c) **Technical support.** The World Bank task teams will include technical specialists with expertise in a range of areas, drawn from within the institution and development partners (DPs) such as the FAO. Technical specialists unavailable in the World Bank Group and FAO/World Bank Cooperative Program (FAO/CP) pool would be recruited externally to support the implementation of the project. Members of the project's task team would organize and undertake field visits to verify compliance with the policies and procedures spelled out in the Financing Agreement, the PIM and other manuals, identify bottlenecks affecting implementation progress, and provide advice and recommendations to overcome the identified implementation challenges.

(d) **Fiduciary aspects.** The World Bank Fiduciary and Procurement Specialists will provide hands-on procurement management support and FM support to the NCU.

(e) **Safeguard compliance.** The task team will also have safeguard experts to help in capacity building and technical review of demanding safeguard cases. The Safeguards Specialists' role will be to monitor progress of the different environmental and social management systems, build up a database, develop indicators, and ensure that the stakeholders are properly briefed and coordinating among themselves and provide expert advice as and when required.

(f) **Monitoring, evaluation, and knowledge management.** The task team will help the NCU in setting up and maintaining the project's decentralized M&E system. The system will be designed to facilitate systematic collection of the required data, which are needed to track progress in meeting the PDO, generate financial information, and document compliance with safeguards policies. Information generated by the M&E system, complemented by information emerging at the time of the midterm review, will be used to adjust operational procedures and make the required mid-course corrections to the project implementation modalities, if deemed necessary.

2. The project's implementation will be supported by the task team members based in the World Bank office in Niamey. Staff from other offices and consultants will provide additional support as needed.

B. Implementation Support Plan and Resource Requirements

3. In general, the task team will conduct two annual implementation support missions and field visits to selected target regions; however, during the first two years at least three missions will be undertaken annually. The Government will be required to prepare and share the formal documents for the mission's consideration at least two weeks before the mission takes place.

4. The World Bank's Procurement, FM, and Safeguards (both social and environment) Specialists will provide regular, timely implementation support, and technical assistance to the counterpart teams during project implementation. These team members will also identify capacity building needs to strengthen the procurement, FM, and safeguard capacity of the client.

- **Procurement.** In addition to carrying out an annual post review of procurement that falls below the prior review thresholds, the Procurement Specialist will provide focused procurement support including: (a) reviewing procurement documents and providing timely feedback to the counterparts; (b) providing detailed advice and guidance on the application of the World Bank's Procurement Guidelines; and (c) monitoring procurement progress against the Procurement Plan.
- **Financial Management.** The FM Implementation Support Plan will be risk-based and will include the review of the project's FM system, including, but not limited to, accounting, reporting, and internal controls. The FM team will also include reviews of quarterly reports; review of annual audited financial statements, and Management Letters as well as timely follow up of issues that may arise; and participation in project supervision missions as appropriate.

5. Tables 3.1 and 3.2 indicate the level of inputs that will be needed from the World Bank to provide appropriate and adequate implementation support for the proposed project during implementation.

Table 3.1: Implementation Support Plan

Time Year	Focus	Primary Skills Needed	Number of Missions	Estimated Budget (US$)
Year 1	• Project launch • Initialization of project components • FM systems functioning effectively • Procurement practices following World Bank norms • ESMF in place	• Team lead • FM, procurement • Environmental Specialist • Social Safeguards Specialist • Financial Sector Specialist • Irrigation Specialist • Value Chain/Business Plan Specialist • Agricultural Economist • Livestock Specialist • Gender Specialist • M&E Specialist • Communication Specialist	3	250,000
Year 2	• Monitor implementation of project activities	• Team lead • FM, procurement • Environmental Specialist	2	250,000

Time Year	Focus	Primary Skills Needed	Number of Missions	Estimated Budget (US$)
	• FM, procurement, safeguards	• Social Safeguards Specialist • Financial Sector Specialist • Irrigation Specialist • Value Chain /Business Plan Specialist • Agricultural Economist • Livestock Specialist • Gender Specialist • Nutrition Specialist • M&E Specialist		
Year 3	• Monitor implementation of project activities • FM, procurement, safeguards • Midterm review	• Team lead • FM, procurement • Environmental Specialist • Social Safeguards Specialist • Financial Sector Specialist • Irrigation Specialist • Value Chain/Business Plan Specialist • Agricultural Economist • Livestock Specialist • Gender Specialist • M&E Specialist/communication	2	180,000
Year 4	• Monitor implementation of project activities • FM, procurement, safeguards	• Team lead • FM, procurement • Environmental Specialist • Financial Sector Specialist • Social Safeguards Specialist • Irrigation Specialist • Value Chain/Business Plan Specialist • Livestock Specialist • Gender Specialist • M&E Specialist/communication	2	180,000
Year 5	• Monitor implementation of project activities • FM, procurement, safeguards	• Team lead • FM, procurement • Environment Specialist • Social Safeguards Specialist • Financial Sector Specialist • Irrigation Specialist • Value Chain/Business Plan Specialist • Agricultural Economist • Livestock Specialist • Gender Specialist • M&E Specialist/Communication	2	180,000

Time Year	Focus	Primary Skills Needed	Number of Missions	Estimated Budget (US$)
Year 6	• Project withdrawal and closure • Implementation Completion and Results Report (ICR)	• Team lead • FM, procurement • Environmental Specialist • Financial Sector Specialist • Social Safeguards Specialist • Irrigation Specialist • Value Chain/Business Plan Specialist • Agricultural Economist • Livestock Specialist • Gender Specialist • M&E Specialist • Communication Specialist • Economist • ICR writer	2	180,000

Table 3.2: Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips Per year	Comments
Task Team Leader	20	3	Washington DC or Niamey-based
Financial Sector Specialist—Co-Task Team Leader	10	3	Washington DC or Niamey-based
FM Specialist	6	NA	Niger country office-based
Procurement Specialist	6	NA	Niger country office-based
Environmental Safeguards Specialist	6	NA	Region-based
Social Safeguard Specialist	6	NA	Region-based
Small Scale Irrigation Spec.	7	2	FAO/CP
M&E Specialist	7	2	
Private Sector Specialist	7	2	
Agric. Specialist	7	3	Washington, D.C. or FAO CP
Livestock Specialist	7	3	Washington, D.C. or region-based
Gender Specialist	7	3	Washington, D.C. or region-based
Communication Officer	7	2	Mali country office- based
Operation Analyst	7	2	Niger country office- based
Program Assistant	10	2	Niger country office-based

Annex 4: Economic and Financial Analysis

A. Introduction

1. The Agriculture and Livestock Transformation Project (PIMELAN) is expected to be implemented over a six-year period under the oversight of MAGEL. Its total cost is estimated at US$134.9 million.

2. The project is designed to overcome major constraints that hinder the productivity, competitiveness, and marketing of selected agricultural and livestock value chains in Niger, including: (i) an irregular and insufficient supply of inputs and services to support production and post-harvest activities (advisory, managerial, entrepreneurial and management services, production inputs, financial credit, etc.) in terms of quality, quantity and price; (ii) the inefficiency of marketing systems, and consequent difficulty of accessing market outlets; (iii) the lack of financial facilities adapted to the needs of the selected value chains; and (iv) a weak institutional, legislative, and business enabling environment to support the development and competitiveness of farms and agri-business enterprises.

3. The project will generate benefits regarding the development of the following value chains, *inter alia*: rice, onions, tomatoes, peppers, cowpeas, potatoes and other vegetables; and meat, milk, hides and skin, poultry, and eggs, etc. Within these value chains, the project will facilitate the access of farms or enterprises to efficient and resilient production, post-harvest and processing technologies (irrigation, quality seeds, post-harvest and equipment processing) as well as marketing technologies (conservation, storage, and market infrastructures). The project will provide *inter alia* (see details in Annex 2): (i) support to agriculture extension, veterinary and phytosanitary services, as well as strengthening of the policy planning and regulatory framework (Component 1), (ii) individual investment planning and financing, as well as support to PFIs (Component 2), and (iii) project coordination and contingent emergency risk support (Components 3 and 4). The related activities will use resources, the effects and impacts of which on the beneficiaries individually and the country as a whole, are assessed and quantified hereafter.

4. This annex presents successively (i) the main assumptions of the financial and economic analysis; (ii) the financial results of the typical business models likely to be implemented by actors in targeted value chains, with a particular focus on smallholders at production level, and SMEs downstream of production; and (iii) the economic results of the project as a whole. The technical data underlying project design and typology, e.g. regarding technology options and related schedule of production and operating costs, were prepared for 'typical' business models assumed to be representative of investment initiatives expected to be developed by farmers and private operators under the project. The technical and economic data were collected from farms or enterprises already existing in the project areas, as well as from other data sources, such as agriculture technical services, service providers, research establishments, and other development projects.

B. Main assumptions

5. This annex covers in sequence the financial analysis for individual operators and the economic analysis from the viewpoint of the national community. The financial analysis discusses the efficiency of the use of project resources by individual beneficiaries and measures the financial viability and sustainability of the investments as well as their impacts on their farms/enterprises. In contrast, the project economic analysis is performed from the point of view of the national interest. It estimates the following indicators of economic impact for the national community as a whole: expected economic benefits, economic Internal Rate of Return (IRR) and Net Present Value (NPV), and performs the corresponding sensitivity analysis.

6. The estimate of the project's incremental financial and economic benefits is based on the comparison between the 'with project' situation vs. the 'without or counterfactual situation' that takes into account the changes that occur without the implementation of project.

7. The approach adopted for the economic and financial analysis is based on a cost-benefit analysis (CBA). The costs are the resources needed for implementing project activities, as reflected in the Costab. The benefits considered are those generated by productive investments at the level of the farms and enterprises, i.e. the investment subprojects (SPs), under Subcomponent 2.2. These benefits are easily and objectively quantifiable. The benefits of public investments and services (e.g. extension advisory and other support services, and capacity building) under Component 1, are clearly positive, but difficult to assess. These benefits were not taken into account in the calculation of the profitability of the project, and therefore profitability estimates are conservative.

C. Typical Models

8. In order to estimate the project's benefits, typical models of subprojects (SPs) have been identified that are representative of the project-supported Income Generating Activities (IGAs) under Subcomponent 2.2. These models are based on the concept of productive partnerships underlying SPs, linking producers or processors to off-takers and other operators downstream of production at post-harvest, processing, and marketing stage. The models are those that will be financed typically under the two windows of the project CSF scheme using Matching Grants (MGs), respectively: (i) Window 1 for micro SPs of average cost of US$2,300 in Fragile, Conflict and Violence (FCV) areas; the beneficiaries will be granted matching grants (MGs) of US$2,000 on average; this window will target vulnerable groups as a priority (especially women and youth); and (ii) Window 2 for Small and Medium Enterprise (SME) SPs from all project areas; these SPs will have an average cost of US$100,000 and beneficiaries will be granted MGs of US$44,000 on average. The preparation of subproject proposals for both windows will be facilitated by project-financed BSPs.

9. The productive partnerships (PPs), underlying the investment subproject definition, are based on formal or informal relationships established between stakeholders within given value chains. They are assumed to be informal in the case of CSF Window 1. Typically, the identification of clusters of subprojects will be made under this window to create the partnerships. In contrast, the requirement is that PPs be formalized under CSF Window 2. Under this window two typical formal PPs can be identified: (i) the Cooperative Model, i.e. a cooperative with formal statutes that helps actors in given value chains to organize around key structuring functions and allows them to collectively improve their performance; these functions can include access to quality production goods (inputs, seeds/seedlings, chicks, fingerlings, equipment, raw materials for packaging, etc.), access to quality services (credit, insurance, training, advisory support, technical, managerial, entrepreneurial support), and connection to markets; and (ii) the Productive Alliance model based on the conclusion of formal contracts between partners, such as a leading company established nationally and internationally, and providing access to technology, funding and markets, and smallholders (producer/processors) represented by their producer groups.

D. Representative subproject models

10. The project's economic and financial analysis is based on typical models, representative of the project-supported investment activities. These models cover clusters of activities required to develop productive partnerships, including activities at production level, as well as downstream of production at post-harvest, processing, and marketing level. The typical models, representative of CSF Window 1 subprojects, are summarized in the form of one 'average' model. The nine models, representative of CSF Window 2 SME subprojects, are described in the next paragraph. It is to be noted that, although their title mentions only production activities, these subprojects comprise all the activities under the productive partnerships downstream of production

(storage, processing, transport, and marketing). In computing subproject benefits it has been assumed that the technology adoption rate was 70 percent;[39] this is taken as a proxy for the success rate of Subprojects.

11. The typical models under CSF Window 2 regard the following income-generating activities:

- 3 ha of irrigated production of onions, peppers, potatoes under the Californian solar energy system;
- 3 ha of irrigated production of onions, peppers, potatoes under the Californian system with a diesel/gas motor pump unit;
- 3 ha of irrigated production of onions, peppers, potatoes under a drip system with gas water pump;
- 3 ha of irrigated onion production, pepper, potato under drip system with solar energy;
- Production of fish on 8 fish ponds of 200 m² each;
- Hatchery mono-sex fry;
- Local poultry from an initial nucleus of 20 hens and 1 rooster;
- Milk production; and
- Livestock fattening/meat production.

12. The characteristics of the typical subprojects under both CSF windows, in terms of number, average cost, and direct beneficiaries are presented in Table 4.1 below. These typical SPs are considered as representative of the entire spectrum of subproject activities. They number 3,500 in total for the benefit of 15,000 beneficiaries under Component 2.

Table 4.1: Number of typical subproject models, average cost, and direct beneficiaries per Window of the project Cost Sharing Facility

Typical models	Number of Subproject Models	Average Cost (US$)	Direct beneficiaries
Window 1: Micro subprojects			
Sub-Total Window 1	**3,000**	**2,300**	**9,000**
Window 2: SME subprojects			
3 ha Californian subsystem with diesel pump	75	60,000	900
3 ha Californian system with solar energy	80	80,000	960
3ha drip system with diesel	30	110,000	360
3 ha drip system with solar	35	130,000	420
Water bodies for fish production	50	100,000	600
Hatchery for mono sex fry	10	180,000	120
Poultry with an initial nucleus of 20 females	100	35,000	1200
Milk	45	200,000	540
Cattle Fattening	75	160,000	900
Sub-Total Window 2	**500**	**100,100***	**6,000**
Total Cost Sharing Facility (CSF)	**3,500**	**-**	**15,000**

* Weighted average

[39] The new technology adoption rate is based on the results of WAAPP Niger.

E. Financial results of typical models

13. All of the models assessed as part of this financial analysis are viable, generating significant amounts of additional income and attractive returns on the investment with IRRs in the range of 42 to 82 percent (see Table 4.2). The analysis shows that the models are profitable even without the grant, with a positive IRR in the range of 32 to 50 percent (see Table 4.3), i.e. greater than the prevailing rate for commercial borrowing estimated at 15 percent. The analysis without the grant reveals that project-supported SPs are intrinsically viable. This said, the grant is required to help investors cover their initial negative cash-flows in the absence of sufficient support from PFI financing. Overall, all models also indicate positive net present value (NPV) in the case of both with and without the grant which further confirms their positive financial viability.

Table 4.2: Summarized financial results for typical Subproject Models (with and without subsidy)

Models	With Subsidy			Without Subsidy	
	MG (US$)	NPV (US$)	IRR (%)	NPV (US$)	IRR (%)
Window 1: Micro subprojects					
Average	2,000	135,034	79	105,440	50
Window 2: SME subprojects					
3 ha Californian subsystem with diesel pump	27,000	38,130	42	35,512	28
3 ha Californian subsystem with solar energy	36,000	72,014	48	68,310	34
3 ha drip system with diesel pump	49,500	65,342	59	62,086	38
3 ha drip system solar pump	58,500	112,714	75	108,372	46
Water bodies for fish production	45,000	38,168	39	37,376	33
Hatchery for mono sex fry	81,000	309,124	82	307,378	46
Local poultry with an initial nucleus of 10 females	15,750	104,516	61	101,892	44
Milk	90,000	214,954	60	210,588	38
Cattle for beef production	72,000	199,514	43	194,094	32

F. Economic Analysis

14. From an economic view point the assumptions adopted are as follows: (i) the economic costs were generated using Costab, (ii) the economic benefits were estimated at 80 percent of the financial benefits because the prices of products are those of on-farm or off-farm sales, without transport, taxes or consideration of certain transfers between agents, (iii) the adoption rate of new technologies promoted by the subprojects was assumed to be 70 percent, equivalent to the failure rate, (iv) the economic cost of labor was considered corresponding to about 60 percent of the financial cost of labor, given the high unemployment and underemployment rate in rural Niger, (v) the discount rate used is 8 percent, corresponding to the long-term cost of capital for the country, (vi) the analysis period is 15 years, (vii) the economic cost retained is the total project cost coming out of Costab deducting the amount of the "grant" (MG) category which is a transfer, and (viii) 100 percent of the quantifiable benefits of the project, i.e. not counting the benefits from structuring and capacity building investments.

15. Based on these assumptions, the project's Net Present Value (NPV) is approximately US$22.7 million. The Economic Rate of Return (ERR) of the project is around 15 percent.

16. The scenarios and corresponding results for the sensitivity analysis, corresponding to the potential risks to be encountered, are as follows (see Table 3):

- *10 percent, 20 percent, and 50 percent increase in project costs*: IRR of 13 percent, 12 percent, and 8 percent; and NPV US$17.9 million, US$13.1 million, and US$-1.2 million;
- *10 percent, 20 percent and 50 percent decreases in project gross margins*: IRR of 13.0 percent, 11.0 percent, and 3.0 percent, and NPV US$15.7 million, US$8.6 million, and minus US$-12.6 million;
- *One-year and two-year lag in the realization of benefits*: IRR of 12.0 percent and 10.0 percent, and NPVs US$13.7 million and US$5.4 million;
- *Total absence of benefits every three years* due to the exceptional effects of climate change: IRR of 7.0 percent; and NPV of US$-1.5 million.
- *Shadow price of carbon.* Public good benefits, that is the benefits of climate mitigation valued at a shadow price of carbon, are included in the economic analysis.[40] The project's annual net carbon balance is -66,113 tCO_2e emissions over 15 years (Annex 5). This results in an NPV of US$48.5 million and IRR of 24 percent for a low shadow price of carbon and an NPV of US$74.3 million and IRR of 35 percent for a high shadow price of carbon.

17. The sensitivity analysis shows therefore that the project's performance is robust.

Table 4.3: Summary Economic Results from Sensitivity analysis

Assumptions	Risks	IRR	NPV (US$ million)
Baseline scenario		15%	22.7
Cost increase of 10%	Increased investment and operating costs at the level of the economic initiatives of project beneficiaries	13%	17.9
Cost increase of 20%		12%	13.1
Cost increase of 50%		8%	-1.2
Benefit decrease of 10%	Declining yields and selling price of products, and low level of adoption of technologies promoted by the project	13%	15.7
Benefit decrease of 20%		11%	8.6
Benefit decrease of 50%		3%	-12.6
Delay of benefits by one year	Delay in project implementation and/or low technology adoption rate	12%	13.7
Delay of benefits by two years		10%	5.4
Zero benefits every three years	Hazards/ exceptional weather events	7%	-1.5
Low shadow price of carbon	Inclusion of climate mitigation benefits	24%	48.5
High shadow price of carbon		35%	74.3

[40] See 'Guidance Note on Shadow Price of Carbon in Economic Analysis', World Bank, Sept. 2017. The low values of the shadow price are estimated at US$40 per tCO_2e emission in year 2020 and increase to US$54 per tCO_2e emission in year 2034; the high values of the shadow price are estimated at US$80 per tCO_2e emission in year 2020 and increase to US$109 per tCO_2e emission in year 2034.

Annex 5: Greenhouse Gas (GHG) Analysis

World Bank Mandate

1. In its 2012 *Environment Strategy*, the World Bank adopted a corporate mandate to conduct greenhouse gas (GHG) emissions accounting for investment lending. The quantification of GHG emission is a major step in managing and ultimately reducing emissions and is becoming common practice for many international financial institutions.

2. The World Bank has adopted the Ex-Ante Carbon-balance Tool (EX-ACT) developed by FAO in 2010,[41] to assess a project's net carbon-balance. This is the net balance of tons of CO_2 equivalent (tCO_2e) GHGs that were emitted, or carbon sequestered because of project implementation compared to a "without project" scenario. EX-ACT thus estimates the carbon stock changes as well as GHG emissions per unit of land, expressed in tCO_2e per hectare and year.

The project focus and objectives

3. The project will help farmers and entrepreneurs in targeted value chains to increase their productivity and access to markets. The main targeted crop value chains are rice, onions, peppers, potatoes, and cowpeas, and the main livestock value chains are cattle, sheep, goats, poultry, and milk; however, any profitable business plan will be funded if it meets the criteria. As a result, the project is **not** expected to lead to major negative environmental and social impacts. However, the implementation of the project is likely to result in: (i) increased water withdrawals for agriculture; (ii) accelerating the degradation of grasslands and woods by supporting livestock farming and the processing of products using wood energy; and (iii) increased fuel consumption and greenhouse gas emissions through the use of motor pumps and solar power for irrigation water, cattle dung, clearing of cultivated plots, cutting branches of trees to act as a dead hedge, and protecting crops from stray animals.

Data Inputs in EX-ACT

4. Niger has tropical dry climate and Sandy soil type. The project duration is six years; the capitalization period is assumed to be nine years, which is the project lifespan as considered in the economic analysis. Dynamics of evolution are assumed to be linear. Default "Tier 1" coefficients are used.

5. The project proposes several activities that can be captured with the GHG accounting tool EX-ACT. Through component 1 "Improving the quality of agricultural services and policies" the project will promote improved agricultural practices through extension services by developing customized yearly extension programs and longer-term advisory programs for different regions and production systems as well as different producer segments or processes in line with project priorities. Under subcomponent 1.2 the project will provide support to veterinary and phytosanitary services, including a vaccination program to cattle, small ruminants, and chicken.

6. Through subcomponent 2.2, Increasing Access to Finance, the project will support producers, farmer groups, and SMEs in the agriculture sector to improve their ability to sustainably access finance for viable investments (including for their initial working capital), for example in the following areas: (a) improved access to quality production factors (for example, seeds, cuttings, chicks, fertilizers, animal feeds, irrigation by solar pumps and hoses, etc.); (b) infrastructure and/or equipment for processing; and (c) infrastructure and/or equipment to improve storage and transport to reach target markets. In doing so, the project will ensure that those investments

[41] http://www.fao.org/tc/exact/ex-act-home/en/

duly take into consideration climate change adaptation and mitigation considerations. Activities to be covered by the Ex-ACT are summarized below and Table 5.1 provides data inputs for the current, without and with project scenarios:

- Crop farmers (100,000 beneficiaries) receiving support on Good Agriculture Practices (GAPs) under component 1 cultivate approximately 1 ha each and an adoption rate of 70 percent is expected, resulting in about 70,000 ha. In addition, under component 2 (window two under matching grant scheme for cooperative association) it is assumed that 3,500 beneficiaries with an estimated 12,000 ha will receive training and services on GAPs;
- Given the substantial potential for irrigated farming the team has estimated that the project support will rehabilitate 2,750 hectares under small-scale irrigation schemes, which includes replacing existing diesel pumps with solar pumps;
- 2,000 farmers use 150 kg of NPK under subprojects and 100 farmers use 1,500 kg of NPK (30-30-30) under standard microprojects;
- Construction includes warehouses, offices, storage; and
- On livestock, the project will (under component 1) support vaccination programs for PPR (5-10 million doses of vaccine for small ruminants per year), PPCB (7 to 10 million doses for cattle every year), and Newcastle disease (around 10 million doses for poultry every year). A special effort will be placed on Foot and Mouth Disease (FMD), including procurement of the initial 100,000 vaccines. As a result of the vaccination program, the mortality rate for chicks will be reduced to 20 percent, for small ruminants to 10 percent and for cattle to 50 percent.

Table 5.1: Data inputs to EX-ACT in the current, without project and with project scenario

Activities	Current/without project scenario	With project scenario
Introducing improved seeds and agronomic practices.	100,000 ha under traditional cultivation	82,000 ha under improved agronomic practices
Subprojects cover about 8,959 hectares; of this 70% is expansion of agricultural land, and Perennials intercropped with annual crops is introduced on 30% of the land.	Currently: 6,271 ha tropical savannah Without project: conversion to agricultural land, under traditional practices 2,687 ha under traditional practices	6,271 ha converted from tropical savannah, under improved practices 2,687 ha covered with perennials
Fertilizer use	No fertilizers	2,000 farmers use 150 kg of NPK under subprojects and 100 farmers use 1,500 kg of NPK (30-30-30) under standard

		microprojects 100,000 kg + 150,000 kg = 250 tons of N per year from NPK 250 tons of P per year from NPK 250 tons of K per year from NPK
Rehabilitation of small-scale irrigation, including replacing diesel-pumps with solar-powered pumps.	2,750 hectares of small-scale irrigation with diesel pumps (fuel 200l/ha/y)	2,750 hectares of small-scale irrigation schemes rehabilitated, using solar-pumps (no fuel)
Construction (concrete) – agriculture offices, warehouse/processing building, industrial building.	No construction	4,500 m^2 for agricultural offices 2,600 m^2 for industrial buildings 10,000 m^2 for agricultural/warehouse buildings
Introducing improved animal health services.	Participating households own about 10M chickens under traditional management Without project: 70 percent mortality rate: 3M chickens by year 6 Participating households own about 8,250 cattle under traditional management Without project: 30 percent mortality rate: 5775 cattle by year 6 Participating households own about 7,500 small ruminants under traditional management Without project: 50 percent mortality rate: 3,750 small ruminants by year 6	Mortality rate decreased to 20 percent, resulting in 8M chickens by year 6 Mortality rate decreased to 10 percent, Resulting in 7,425 cattle by year 6 Mortality rate decreased by 50 percent, resulting in 5,625 ruminants by year 6

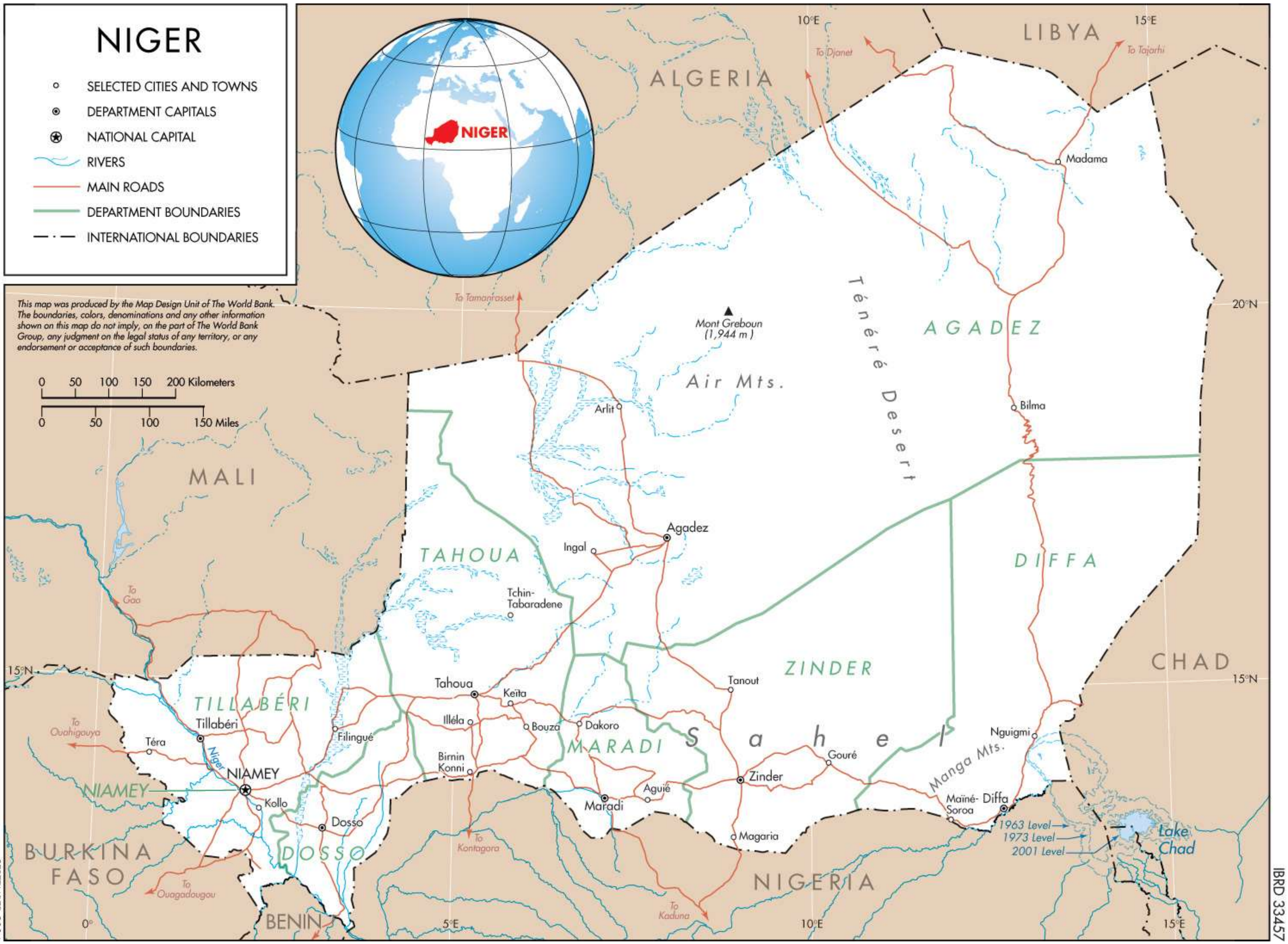
7. On these GHG emissions and avoidance, an *ex-ante* carbon footprint was performed through the EX-ACT tool. The balance sheet of all GHGs combined is as follows:

Table 5.2: Detailed Results

Continent		**Africa**	**Niger**	**Dominant Regional Soil Type Sandy**
Components of the project		**Gross fluxes**		
		Without	**With**	**Balance**
		All GHG in tCO2eq		
		Positive = source / negative = sink		
Land use changes				
Other LUC		0	105,312	105,312
Agriculture				
Annual		229,768	-997,780	-1,207,547
Perennial		0	-214,584	-214,584
Livestock				
Cattle and chicken		456,732	759,436	302,703
Inputs				
Fertilizers, fuel, construction		21,635	44,061	22,426
Total		708,135	-283,555	**-991,690**
Per hectare		8	-3	-11
Per hectare per year		0.5	-0.2	-0.7

Overall results

8. Overall the estimation results show that agriculture interventions constitute a modest net carbon sink. The gross sink for with project scenario is -283,555tCO_2e, the total net emissions are **-991,690** tCO_2e with an annual net average carbon emission of -66,113 tCO_2e.


NIGER
SELECTED CITIES AND TOWNS
DEPARTMENT CAPITALS
NATIONAL CAPITAL
RIVERS
MAIN ROADS
DEPARTMENT BOUNDARIES
INTERNATIONAL BOUNDARIES
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MARADI
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Air Mts.
Mont Greboun (1,944 m)
Sahel
Manga Mts.
Madama
Bilma
Arlit
Agadez
Ingal
Tchin-Tabaradene
Tahoua
Keïta
Illéla
Bouza
Dakoro
Birnin Konni
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